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NATURAL HISTORY

OF

BIRDS, FISH,

INSECTS AND REPTILES.

EMBELLISHED

With upwards of Two Hundred ENGRAVINGS.

IN FIVE VOLUMES.

VOL. I.

LONDON:

PRINTED BY J. S. BARR,

BRIDGES-STREET, COVENT-GARDEN.

M DCC XCIII.

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CONTENTS

OF THE

FIRST VOLUME.

	Page
The Physiology and Structure of Birds -	1
The Ostrich - - -	44
—— *Emu* - - -	61
—— *Cassowary* - - -	65
—— *Dodo* - - - -	73
—— *Solitary aud Bird of Nazareth* -	75
Of Rapacious Birds - - -	77
The Eagle, and its affinities - -	85
—— *Golden Eagle* - -	98
—— *Common Eagle* - - -	99
—— *Bald Eagle* - - -	ibid
—— *White Eagle* - - -	ibid
—— *Rough-footed Eagle* - -	100
—— *White-tailed Eagle* - -	ibid
—— *Erne* - - - -	ibid
—— *Black Eagle* - - - -	ibid
—— *Sea Eagle* - - - -	ibid
—— *Osprey* - - - -	101

Page

—— *Jean le Blanc* - - - - 101
—— *Eagle of Braſil* - - - ibid
—— *Oroonoko Eagle* - - - ibid
—— *Crowned African Eagle* - - ibid
—— *Eagle of Pondicherry* - - - 102
The Condor - - - 103
The Vulture - - - 109
—— *Golden Vulture* - - - - 119
—— *Alpine Vulture* - - - 120
—— *Fulvous Vulture, or Griſſon* - ibid
—— *Cinereous Vulture* - - - ibid
—— *Hare Vulture* - - - ibid
—— *Aſh-coloured, or ſmall Vulture* - 121
—— *Carrion Vulture* - - - - ibid
—— *Egyptian Vulture* - - - ibid
—— *Secretary* - - - ibid
The Falcon, and its affinities - - 122
—— *Gyr-Falcon* - - - - 125
—— *Falcon* - - - - 126
—— *Lanner* - - - 127
—— *Sacre* - - - ibid
—— *Hobby* - - - ibid
—— *Keſtril* - - - ibid
—— *Martin* - - - - ibid
—— *Kite* - - - - 137
—— *Buzzard* - - - - 139
—— *Honey Buzzard* - - - 140

Page

—— *Moor Buzzard* - - - - 140
—— *Goſs-hawk* - - - - 141
—— *Sparrow-hawk* - - - 142
The Butcher-Bird - - - 143
—— *Malabar Shriek* - - 149
The Owl - - - - ibid
The Great horned Owl - - - 153
—— *Little horned Owl* - - - 155
—— *Screech Owl* - - - - 156
—— *White, or Barn Owl* - - ibid
—— *Brown Owl* - - - ibid
—— *Little Brown Owl* - - - 157
Of the Poultry kind - - - 165
The Buſtard - - - - 172
—— *Little Buſtard* - - - 178
—— *Houbara, and the Rhaad* - ibid
Of the Cock - - - - 179
—— *Hamburgh Cock* - - - 192
—— *Wonderful Indian Cock* - 193
—— *Indian Cock* - - - 194
—— *Muſcovian black Game-hen* - - ibid
The Turkey - - - - 195
The Peacock - - - 207
—— *Peacock of Thibet* - - - 212
—— *Japan Peacock* - - - idid
The Grous and its affinities - - 214
—— *Cock of the Wood* - - - 215

Page

—— *Black Grous* - - - 219
—— *Red Grous, or Moor-Cock* - 220
—— *Hazel Grous* - - - 221
—— *Pin-tailed Grous* - - - ibid
—— *Ptarmigan Grous* - - ibid
The Pintada, or Guinea-hen - - 222
The Pheaſant - - - 225
—— *Golden Pheaſant* - - - 232
—— *Silver Pheaſant* - - - 233
The Partridge - - - 234
—— *Weſt India Partridge* - - 239
—— *Hare-footed Partrldge* - - ibid
The Quail - - - - 241
Of the Pie kind - - 245
—— *Raven* - - - 250
—— *Common Carrion Crow* - 255
—— *Royſton Crow* - - - 257
—— *Jack Daw* - - - ibid
—— *Corniſh Chough* - - - 254
—— *Rook* - - - - ibid
—— *Calao, or horned Indian Raven* - 262
—— *Night Raven* - - - 263
—— *Capricalca* - - - 264
The Magpie, and its affinities - 265
—— *Jay* - - - - 270
—— *Bengal Jay* - - 271
—— *Chatterer* - - - ibid

Page

—— *Roller* - - - - 271
—— *Red-beaked Toucan* - - 272
The Bird of Paradiſe - - 277
The Woodpecker, and its affinities - 284
—— *Green Wood-ſpite* - - 285
—— *Leſſer Woodpecker* - - 291
—— *Great Black Woodpecker* - - 292
—— *Gold Merle* - - - - 297
The Cuckoo - - - 298
—— *Cuckoo of Carolina* - - 307
—— *Cape Cuckoo* - - - 310
The Parrot - - - - 314
—— *Maccaw* - - - 329
—— *Common Parrot* - - - ibid
—— *Lory* - - - 330
—— *Paroquet* - - - 331

Directions for placing the Plates in the

FIRST VOLUME.

Page 44	Fig, 1, 2
98	Fig. 3, 4
126	Fig. 5, 6
137	Fig. 7, 8, 9
172	Fig. 10, 13
179	Fig. 11, 12, 14
215	Fig. 15, 16
225	Fig. 17, 18
234	Fig. 19, 20
250	Fig. 21, 22, 23, 24
277	Fig. 25, 26
284	Fig. 27, 28
294	Fig. 29, 30, 31, 32
314	Fig. 33, 34, 35, 36.

NATURAL HISTORY

OF

BIRDS, FISH, REPTILES, &c.

THE PHYSIOLOGY AND STRUCTURE OF BIRDS.

WHATEVER part of the Univerſe we take into conſideration, it appears to be repleniſhed with life, and "burſting into birth;" no part, not even the yielding air, and thoſe tracts of ſeeming ſpace, where man (we had almoſt ſaid) could *never* aſcend, (unleſs the diſcovery of *balloons* may militate againſt the aſſertion), are found deſtitute of inhabitants, nor can we proceed one ſtep without diſcovering freſh traces of a wiſdom as inexhauſtible in the variety of its plans as in the richneſs and fertility of the execution.

A BIRD in flight may be ſtiled a maſs of matter, raiſed aloft in ſpite of the air, and the power of gravitation impreſſed on all bodies, and which impels them to the earth; it is tranſported, not by a foreign force, but by a power of ſelf-motion, accommodated to its purpoſe, and capable of continuing aloft with graceful vigour for a conſiderable length of time. In the anatomy of Birds, every part ſeems formed for traverſing the ærial regions; ſome launch away in repeated ſprings, and advance by ſucceſſive boundings; others ſeem to glide through the air, and cleave it with an equal and uniform progreſs; the former ſkim over the earth, the latter ſoar up to the clouds; yet they can all diverſify their flight to avoid the enemy whom they cannot oppoſe; they can aſcend in right, oblique, or circular lines; ſuſpend themſelves, and continue motionleſs in an element lighter than themſelves; then ſtart into motion, remount, or precipitate in an inſtant, like a deſcending ſtone; or tranſport themſelves without oppoſition, or hazard, wherever their neceſſities or pleaſures invite them. Nothing is more natural to eyes that have been habituated to ſuch a ſight than the bird which

wings

wings the air; yet to the optics of reaſon nothing is more aſtoniſhing.

The external ſtructure of Birds, is peculiarly adapted for ſwiftneſs of motion; for it is neither extremely maſſive, nor equally ſubſtantial in all its parts; but being deſigned to riſe in the air, is capable of expanding a large ſurface without ſolidity. The body is ſharp before, to pierce and make its way through that element; it then gradually increaſes in bulk, 'till it has acquired its juſt dimenſions, and falls off in an expanſive tail.

But whatever wiſe adaptation of means to ends may appear in the configuration of the feathered race, there is ſtill ſomething more intereſting, becauſe, perhaps, more obvious, in attending to their natural intercourſe, or, as a philoſophical poet delicately expreſſes it, "*the paſſion of the groves*;" to the curious mechaniſm of their neſts, the ſolicitude with which they attend their eggs, the ſtructure of the egg itſelf, their inſtinct, and the birth and education of their young.

Terreſtrial animals of the quadrupedal claſs, are brought into the world completely formed, and in a ſtate of active exiſtence, like their maternal parent, and they are termed *viva-*

parous; in oppoſition to theſe ſtand the *oviparous*, or ſuch as conceive eggs, which they afterwards bring forth, and from which, by the incubation of the parent, or ſome other principle of warmth and fermentation, at length animals ariſe; which after they have conſumed the moiſture that ſurrounded them, and arrive to a ſufficient bulk, firmneſs, and ſtrength, break their ſhells, and come forth.

When the connubial league is once ſettled, Birds have immediate recourſe to the neceſſary preparations for their tender offſpring; and here it is not unworthy of remark, that the ſame temper of weather, which raiſes the general warmth in the feathered tribe, covers alſo the trees with leaves, and the fields with graſs, for their ſecurity and protection; and produces ſuch infinite ſwarms of inſects, for the ſupport and ſuſtenance of their reſpective broods.

The buſineſs of building the neſt is the common care of both parents, and is performed with no ſmall degree of aſſiduity and apparent deſign; and now nothing is ſeen but reſtleſs hurry. Nor is there, perhaps, leſs variety in the choice of their ſituation, than in the architecture of their retreats; ſome fly to the holly-hedge, ſome to the thicket———

" Some

" Some to the rude protection of the thorn
" Commit their feeble offspring; the cleft tree
" Offers its kind concealment to a few;
" Their food its insects, and its moss their nest.
" But most in woodland solitudes delight,
" In unfrequented glooms, or shaggy banks,
" Steep, and divided by a babbling brook
" Whose murmurs soothe them all the live-long day,
" When by kind duty fixed. Among the roots
" Of hazel, pendant o'er the plaintive stream,
" They frame the first foundation of their domes:
" Dry sprigs of trees, in artful fabric laid,
" And bound with clay together.

But wherever they dispose themselves they always take care to be accommodated with a shelter, and where a natural one does not offer itself they very ingeniously make a covering of a double row of leaves, down the slope of which the rain trickles without entering into the little opening of the nest that lies concealed below. The nest itself is raised on more solid materials, that strengthen it with a foundation; for which purpose they make use of dry wood, shivers of bark, thorns, reeds, thick hay, and compact moss; and on this first layer, which seems very shapeless, they spread and fold in a round all the most delicate materials, as down, wool, silk, spiders webs, feathers, and a hundred other little materials, that are all useful in the nest,

neſt, and which communicate a convenient warmth to them and their young.

When the ordinary ſupplies fail them there is ſcarce any invention to which they have not recourſe for a recruit: "this (ſays the Abbé de la *Pluche)* I learnt from ſome goldfinches which I bred:—I had only furniſhed them with hay for the ſtructure of their neſt; and the female, for want of raw ſilk or cotton, found out an expedient that ſurpriſed me: ſhe began to unplume the breaſt of the male without the leaſt oppoſition from him, and afterwards lined her little apartment very artificially with the down."

There is another peculiarity obſervable in the feathered race, which can only be referred to that wonderful principle that directs their general conduct; every different kind of bird obſerves a particular plan in the ſtructure as well as the furniture of its little apartment; yet all of the ſame ſpecies work after the ſame model. Nor is this conduct owing to imitation; for though you hatch a crow under a hen, and never let it ſee any of the works of its own kind, the neſt it makes will be the ſame, to the laying of a ſtick, with all the other neſts of the ſame ſpecies.

We

We wiſh not, however, dogmatically to aſſert that ſome variations do not ariſe from the circumſtance of place or climate, or the ability to procure materials. The red-breaſt will occaſionally make its neſt with oak-leaves, or with moſs and hair; and in the tropical climates, where the heat of the weather promotes the proceſs of incubation, the bird is leſs ſolicitous about its neſt than in colder regions.

Thus the oſtrich in Senegal, where the heat is exceſſive, neglects her eggs during the day, but ſits upon them in the night. At the Cape of Good Hope, however, where the degree of heat is leſs, the oſtrich, like other birds, ſits upon her eggs both day and night. In countries infeſted with monkies many birds, which in other climates build in buſhes and clefts of trees, ſuſpend their neſts upon ſlender twigs, and thus elude the rapacity of their enemies.

The peculiar architecture of the neſts of each ſpecies ſeems to be adapted to the number of eggs, the temperature of the climate, or the reſpective dimenſions of the little animal's body. In ſome, the blackbird and thruſh for inſtance, the cavity of the neſt is exactly fitted to receive the body of the bird, and this is generally

generally the caſe with birds that build with ſides to their neſts, and make deep cavities: they ſtand within the neſt when they are at work, and make their own bodies the gauge of their dimenſions in building.

Were birds endued with ſcientific knowledge their buildings would doubtleſs be as various as ours: they have, however, no ſcience, nor implements of induſtry, except their beaks; and yet they form works that manifeſt all the ingenuity of the architect, and all the induſtry of the maſon. Some, with the dexterity of the weaver, unite hairs, moſs, and reeds, into one maſs: others connect all the parts of their neſts with a thread, which they ſpin from flue or down, as well as from hemp and hair, and not unfrequently from the webs of ſpiders, which they eaſily procure when theſe wandering creatures dart from place to place, and fill the fields with their threads.

Another claſs again, like the blackbird and lapwing, after they have made their neſt, rough-caſt the inſide with a ſlight covering of clay or mortar, that connects and ſupports it all below; this they alſo temper with moſs; and thus form a complete wall within; or, to

domeſticate

domeſticate the idea, let us call it an apartment commodiouſly furniſhed, and properly calculated to preſerve the neceſſary warmth.

The neſts of the ſwallow and the martin is a ſtructure entirely different from all others; they neither want wood, hoops nor bands, but make a kind of plaſter, or rather cement, with which they erect a dwelling equally ſecure and convenient for themſelves and family. Deſtitute of any of thoſe tools by which "art worketh her wonders," the ſimple proceſs they purſue is to wet their breaſts on the ſurface of the water, then ſhedding this dew over the duſt, they temper and work it up with their bill..

Small birds, whoſe eggs are generally numerous, make their neſts warm, that the animal heat may be equally diffuſed; but the larger ſpecies are leſs ſolicitous in this reſpect. Again, the ſmaller tribes, that live upon fruit and corn, and are often unwelcome intruders upon the labors of man, uſe every caution to conceal their neſts from watchful intruſion: the only ſolicitude of the great birds is to render their refuge inacceſſible to wild beaſts and vermin.

In general, ſay Naturaliſts, every bird reſorts to hatch in thoſe climates or places where its

ſuſtenance is found in greateſt plenty, and always at that ſeaſon when proviſions are in the greateſt abundance. The large birds, and thoſe of the aquatic kinds, chuſe places as remote from man as poſſible, as their food is in general different from that which is cultivated by human labor. Further it is obſerved, in regard of climate, that ſeveral ſorts of water-fowl, which with us make but a very ſlovenly neſt, are much more exact in this particular in the colder regions of the north. There they take every precaution to make it warm; and ſome kinds ſtrip the down from their breaſts, to line it with greater ſecurity.

The important buſineſs of nidulation being now completed, the dam lays her eggs, the number of which varies according to the ſpecies: ſome have only two at a time; others four or five, and ſome even eighteen. When the eggs are laid the male and female brood over them by turns; though this is generally the female's province. And here we muſt unavoidably admire the impreſſions of a ſuperior intelligence that acts upon theſe little creatures: they have no certain knowledge either of what their eggs contain, or of the neceſſity there is to ſit on them in order to hatch them; and yet this animal,

animal, who is ſo active and unſettled at other times, in this moment forgets her natural diſpoſition, and fixes herſelf on the eggs as long as ever is neceſſary: ſhe ſubmits to every reſtraint, renounces all pleaſure, and continues ſometimes more than twenty days inſeparable from her brood, and that with a tenderneſs ſo extraordinary as makes her neglect the calls of appetite.

Nothing can exceed the patience of birds at this period: neither the demands of hunger, nor the near approach of danger, can drive them from the neſt. They are often very fat at the beginning of incubation, yet before its end they are generally waſted to mere ſkin and bone; as we ſee conſtantly is the caſe of domeſtic fowls. The male, on his part, ſhares and alleviates her fatigue; he brings food to his faithful mate, repeats his journies without intermiſſion, and waits on her with the collation ready prepared in his bill: his ſervices are accompanied with the politeſt behaviour, and if ever he diſcontinues his aſſiduity it is to entertain her with his warbling: he acts with ſo much fire and alacrity, and aſſumes ſo many graces, that one is at a loſs to know whether

the painful perſeverance of the little mother, or the officious inquietude of her ſpouſe, are moſt to be admired. Often when ſhe is tired he takes her place, and patiently continues upon the neſt until her return. Sometimes the eggs acquire a degree of heat too powerful for the purpoſes of hatching; in which caſe the dam leaves them to cool a little, and then returns to ſit with her uſual perſeverance and pleaſures

> ——— The appointed time
> With pious toil fulfilled, the callow young,
> Warm'd and expanded into perfect life,
> Their brittle bondage break, and come to light,
> A helpleſs family, demanding food
> With conſtant clamour.

But before we enter upon the culture or education of the young brood, it may not be improper to give a deſcription of what the egg contains, as well as of the manner in which the young is formed therein, and how it iſſues from its confinement.

An Egg is a ſubſtance too generally known to require definition; and a very anatomical nicety in its analyſis would not afford any high degree of ſatisfaction: we ſhall, therefore, ſubſtitute an accurate deſcription, in the place of

of both, and in the language of the moſt induſtrious and beſt informed naturaliſts, Malphigi, Willoughby, Abbe de la Pluche, &c.

One may judge of the eggs of the ſmalleſt birds by that of a hen, where the parts are more apparent. We may eaſily diſtinguiſh the yolk in the centre of the egg, as likewiſe the firſt white ſubſtance that ſurrounds it. Beſides theſe, we can ſee the ligaments that ſuſtain the yolk towards the centre of the egg; and can likewiſe diſcover ſeveral membranes, one of which enfolds the yolk, another the firſt white, a third and fourth encompaſs the whole; and laſtly, we ſee the ſhell, formed for the defence and preſervation of all the reſt. What lies within theſe incloſures has the firſt formation, the ſhell has the laſt, and hardens from day to day. It is a fluxion of ſalts evacuated from the humours of the dam, and which the heat fixes and conſolidates round the egg, to form a cruſt, that has a double function; one qualifies the mother for diſcharging the egg without cruſhing it; the ſecond preſerves the young from all accidents, till it be formed and in a condition to forſake the egg. We may even ſay, that the egg performs to young birds the office of a breaſt and milk, with which the

offſpring

offspring of other animals are nouriſhed: the embryo chick is firſt ſuſtained with the white of the egg, and afterwards with the yolk, when the animal has gathered a little ſtrength, and its parts begin to be fixed.

Under the membrane which ſurrounds the yolk, is found a little cicatrice, or white ſpot, the *punctum ſaliens*, which is only the ſeed where the chick reſides in miniature. It has all its organs at that time, but they are involved and comprehended in a point. If the ſmalleſt portion of that vital ſpirit which is deſtined to animate the maſs, be then infuſed into it, by a proceſs of which we have no idea, the chick receives life at the ſame inſtant, and its whole ſubſtance is rouſed into motion. We have no adequate conception, indeed, of a vital ſpirit; but this expreſſion points out a reality, which is ſufficient for our purpoſe.

When the vital principle has not been infuſed into this ſpeck, which comprehends not only the firſt ſketch but every part of the chick, the egg will contain nothing more than an unprolific nouriſhment, and will never become a living animal. On the contrary, ſhould this enlivening ſpirit be tranſmitted, in the minuteſt degree, through the pores of thoſe membranes

through

through which ſuch a diverſity of aliments has already flowed, it will then open the ſmall veſſels of the chick, diffuſe a general warmth, and convey a nutrimental fluid to the heart. The ſtructure of this little muſcle enables it to open and dilate, for the reception of what paſſes into it on one ſide, and likewiſe to contract itſelf, for diſcharging, through another orifice, what has been already received.

The pulſation of the heart hath ſome analogy to the pendulum of a clock, from whoſe libration the whole machine derives its motions. The moment the heart begins to beat the animal is alive, but ſtill continues to receive, by the mediation of the umbilic duct, a flow of nutritious juices, which it tranſmits into the other veſſels, whoſe branches diſtribute this nouriſhment through the whole body. All thoſe little canals, which were flat before, are now ſwelled and enlarged; the whole ſubſtance imbibes a proper aliment, and the chick begins to grow.

It is almoſt impoſſible to diſtinguiſh, amidſt the fluids that ſurround it, the nature of its daily progreſs and changes, till the period when it iſſues from the ſhell. But let us not omit one precaution, equally evident and aſtoniſhing,

and

and which is obſervable in the ſituation of the ſpeck, out of which the animal is formed. This minute and globular particle of matter, which is lodged on the film that enfolds the yolk, has always its poſition near the centre of the egg, and towards the body of the dam, in order to be impregnated with a neceſſary warmth. The yolk is ſuſtained by two ligaments, viſible at the aperture of the egg, and which faſten it on each ſide to the common membrane glued to the ſhell. Should a line be drawn from one ligament to the other, it would not exactly paſs through the middle of the yolk but above the centre, and would cut the yolk into two unequal parts, ſo that the ſmaller part therof, which contains the ſeed, is of neceſſity raiſed towards the belly of the bird who performs the incubation; and the other part, being more groſs and weighty, always deſcends as near the bottom as the bands will permit; by which means, ſhould the egg be diſplaced, the young cannot receive any injury, and, whatever may happen, it enjoys a warmth that puts all about it into action, and, by degrees, completes the diſengagement of its parts.

As

As it is incapable of ſliding down, it is nouriſhed in eaſe, firſt with this liquid and delicate white, which is adapted to its condition, and afterwards with the yolk, which affords a more ſubſtantial food, and when the bill is hardened and the bird begins to be uneaſy at his confinement, he endeavours to break the ſhell, and does ſo in effect. After which he iſſues out, fully repleniſhed with the yolk, which nouriſhes him a little longer, 'till he has ſtrength enough to raiſe himſelf on his feet, and can march about to look for proviſions, or 'till the parents themſelves come to ſupply them.

Birds that nouriſh their young have generally very few, and it is further obſervable that thoſe birds which are detrimental to us, and with whoſe exiſtence we can eaſily diſpenſe, are the ſpecies that multiply the leaſt; indeed, were the progeny numerous, both the parents would be ſlaves, and the young but indifferently ſupported.

On the other hand, thoſe birds, the young of which feed themſelves when they firſt ſee the day, have often twenty in a brood; and the mother in this caſe, who marches in the van of her progeny, without the ſolicitude of procuring

ſubſiſtence for them, can ſuperintend twenty as well as four. The birds whoſe fleſh is the moſt ſalutary, and whoſe eggs afford the moſt nouriſhment, are fruitful to a prodigy.

The production of the young ſeems to be the great æra of a bird's happineſs; nothing can at this time exceed its ſpirit and induſtry; they are rendered ſenſible of the cares that attend a family, and the important purſuits of common ſubſiſtence takes up their whole care; the warblers are ſilent, it is no longer a ſeaſon for ſinging, or at leaſt they indulge it leſs frequently; their attachment to their offspring operates to a degree that even changes their natural diſpoſition, and new duties introduce new inclinations. The moſt timid become courageous in the defence of their young, and birds of the rapacious kind, at this ſeaſon, become more than uſually fierce and active; they carry their prey, yet throbbing with life to the neſt, and early accuſtom their young to habits of ſlaughter and cruelty. Even the hen, when ſhe becomes the parent of a family, no longer continues the ſame creature; naturally timorous, and before this period, knowing nothing but flight, ſhe becomes an heroine at the head of a troop of chickens; ſhe deſpiſes danger, courageouſly

rageouſly attacks the ſtouteſt dog in defence of her brood, and would probably venture to encounter even a lion.

What ſhall we ſay of the principle which leads them to this conduct?

Equidem credo, quia ſit divinitus illis
Ingenium.

"I think their breaſts with heavenly ſouls inſpir'd."

But though animals in their generation may be wiſer than the ſons of men, yet their wiſdom is confined in a narrow compaſs, and limited to a few particulars. The deſign or conduct is not in the animal, but in the Creator of the animal, who directs its operations to their own good, by what may properly be ſtyled a myſterious influence.

"With what caution," ſays the elegant author of the Spectator, "does the female provide herſelf a neſt in places unfrequented and free from noiſe and diſturbance? when ſhe has laid her eggs in ſuch a manner, that ſhe can cover them, what care does ſhe not take in turning them frequently, that all parts may partake of the vital warmth? when ſhe leaves them, to provide for her neceſſary ſuſtenance, how punctually does ſhe return before they have time to cool, and become incapable of produc-

ing an animal? In the ſummer you ſee her giving herſelf greater freedom, and quitting her care for above two hours together; but in winter, when the rigour of the ſeaſon would chill the principles of life, and deſtroy the young ones, ſhe grows more aſſiduous in her attendance, and ſtays away but half the time. When the birth approaches, with how much nicety and attention does ſhe help the chick to break its priſon? Not to take notice of her covering it from the injuries of the weather, providing it proper nouriſhment, and teaching it to help itſelf; nor to mention her forſaking the reſt, if after the uſual time of reckoning, the young ones do not make their appearance. A chymical operation could not be followed with greater art or diligence, than is ſeen in the hatching of a chick; though there are many other birds that ſhew an infinitely greater ſagacity in all the forementioned particulars.

"But at the ſame time the hen, that has all this ſeeming ingenuity, which is indeed abſolutely neceſſary for the propagation of the ſpecies, conſidered in other reſpects, is without the leaſt glimmerings of thought or common ſenſe. She miſtakes a piece of chalk for an egg, and ſits upon it in the ſame manner; ſhe is inſenſible

ſenſible of any increaſe or diminution in the number of thoſe ſhe lays: ſhe does not diſtinguiſh between thoſe of another ſpecies; and when the birth appears of never ſo different a bird, will cheriſh it for her own. In all theſe circumſtances, which do not carry an immediate regard to the ſubſiſtence of herſelf or ſpecies, ſhe is a very ideot."

Birds of the ſame ſpecies, as we have before remarked, unleſs when reſtrained by peculiar circumſtances, uniformly build their neſts of the ſame materials, and in the ſame form and ſituation, though they inhabit very different climates; and the form and ſituation are always exactly ſuited to their nature, and calculated to afford them ſhelter and protection. When danger, or any other circumſtance peculiar to certain countries, renders a deviation from the common form or ſituation of neſts neceſſary, that deviation is made in an equal degree, and in the very ſame manner, by all the birds of one ſpecies; and it is never found to extend beyond the limits of the country where alone it can ſerve any good purpoſe. When removed by neceſſity from their eggs, birds return to them with haſte and anxiety, and ſhift them ſo as to heat them equally; and it is worthy of obſervation,

obſervation, that their haſte to return is always in proportion to the cold of the climate. But do birds reaſon, and do all of the ſame ſpecies reaſon equally well, upon the nature and extent of danger, and upon the means by which it can beſt be avoided? Have birds any notion of equality, or do they know that heat is neceſſary for incubation? No: in all theſe operations men recognize the intentions of Nature, but they are hid from the animals themſelves, and therefore cannot operate upon them as motives.

Yet we have inſtances of animal ſagacity that ſeem to indicate ſomething very ſuperior to what is generally underſtood to be the operation of inſtinct. It is well known that crows feed upon ſeveral kinds of ſhell-fiſh, when within their reach, and that they contrive to break the ſhell by raiſing the fiſh to a great height and letting it drop upon a ſtone or rock. This may, perhaps, be conſidered as pure inſtinct directing the animal to the proper means of acquiring its food. But what is to be thought of the following fact, communicated, as we are told, by a gentleman whoſe veracity is unqueſtionable, and who being totally unacquainted with the theories of philoſophers had

had of courſe no favourite hypotheſis to ſupport?

"In the ſpring of the year 1791 a pair of crows made their neſt in a tree, of which there are ſeveral planted round his garden, and in his morning-walks he had often been amuſed by witneſſing furious combats between them and a cat. One morning the battle raged more fiercely than uſual, till at laſt the cat gave way, and took ſhelter under a hedge, as if to wait a more favourable opportunity of retreating to the houſe. The crows continued for a ſhort time to make a threatening noiſe; but perceiving that on the ground they could do nothing more than threaten, one of them lifted up a ſtone from the middle of the garden and perched with it on a tree planted in the hedge, where ſhe ſat watching the motions of the enemy of her young. As the cat crept along under the hedge the crow accompanied her by flying from branch to branch, and from tree to tree, and when at laſt puſs ventured to quit her hiding-place, the crow, leaving the trees, and hovering over her in the air, let the ſtone drop from on high on her back." That the crow, on this occaſion, reaſoned is ſelf evident; and it ſeems to be little leſs evident that the ideas

ideas employed in her reaſoning were enlarged beyond thoſe which ſhe had received from her ſenſes. By her ſenſes ſhe might have perceived that the ſhell of a fiſh is broken by a fall; but could her ſenſes inform her that a cat would be wounded or driven off the field by the fall of a ſtone? No; from the effect of the one fall preſerved in her memory ſhe muſt have inferred the other by her power of reaſoning.

Of the great anxiety and courage of birds, in the preſervation of their brood, and their *inſtinctive* diſcernment, we have a ſingular inſtance related by Profeſſor *Reimar*, and ſuch a one as perhaps ſeldom occurred to the obſervations of Naturaliſts.

" Two robins (ſays he) had their neſt within a ſmall hollow of a rock, which was ſhaded by a ſpreading oak: the female had five eggs, which ſhe hatched with ſuch aſſiduity that both I and others often viewed her very near, and even touched her, without her making the leaſt motion to avoid the apparent danger.

" One day my *lying-in* bird was abſent, and I apprehended ſhe had forſaken her neſt; but my ſuſpicions were changed on ſeeing a cuckoo hopping along an adjoining deſcent, and which finally alighted on a tree near where I ſtood, at

at the ſame time I perceived my robins watching the cuckoo's motions. It occurred to me that it is the practice of the female cuckoo to lay its eggs in the neſt of ſome other ſmall bird, and ſuch ſeemed her preſent intention. *Reaſon* would have taught the robins to poſt themſelves in the neſt, the better to defend it, but *inſtinct* determined them to keep at a diſtance, and put the enemy on a wrong ſcent: accordingly the nearer it approached the neſt the more alertly the robins ſtrove to miſlead it, by fluttering about with all the marks of anguiſh, and uſing a note highly expreſſive of diſtreſs; the cuckoo at length, after a long purſuit, returned to a bough much nearer to the neſt than ſhe had yet been; a moment was not, therefore, to be loſt; one of the robins ruſhed under the feathers of the cuckoo's tail, and fell to pecking her with unabating fury, while ſhe kept ſhivering, her bill opened ſo very wide, that the other robin, which attacked her in front, threw herſelf in ſo far that no part of her head was to be ſeen, and the cuckoo, appearing to be ſeized with a kind of vertigo, fell towards the ground, hanging with her claws to the branch on which ſhe had perched, while

her relentleſs enemies availed themſelves of her condition, and would probably have put a period to her exiſtence had not a ſudden ſtorm put a termination to the combat."

Our little progeny are now brought to that period, when

> ——————— light in air
> Th' acquitted parents ſee their ſoaring race,
> And once rejoicing, never know them more.

When the whole family are fully plumed, and capable of flying alone, they are led to the proper places where their food lies, and taught the neceſſary art of providing for their own ſubſiſtence; and when they are completely qualified for this important taſk all future connection is at an end.

Thoſe birds that are hatched earlieſt in the ſpring conſtantly prove the moſt ſtrong and vigorous offspring; while the feeble and tender children of declining ſummer or autumn are ſeldom capable of ſuſtaining the ſeverities of a rigorous winter. But this is a circumſtance that only happens in conſequence of their neſts being repeatedly pillaged, in ſpite of which they perſevere in their efforts for a new progeny.

Let us now reſume our examination of the ſtructure of birds, and how far they are adapted

adapted for the purpoſes to which they ſeem deſtined.

FEATHERS are not leſs an elegant than a commodious dreſs for the inhabitants of the air; not only a guard againſt wet and cold, and a means of hatching and brooding their young, but moſt convenient for flight; for which purpoſe they are neatly placed over the body, from the head towards the tail, to give the bird an eaſy paſſage. They are inverted behind, and laid over each other in regular order. That part of them next the body is furniſhed with a warm and ſoft down; thoſe expoſed to the air and weather are more ſtrongly made, and more curiouſly cloſed, being arrayed with a double beard in two ranks, and longer at one end than the other.

The mechaniſm of the feather is wonderful; the quill is firm; the ſhaft or rib ſtrong, but light and hollow in proportion to its growth; the upper part poſſeſſing proportional ſtrength, but filled with a light parenchyma, or pith; and on the whole, having ſo much ſurface with ſo little gravity as to place the bird almoſt in equilibrium with the air.

The beards, or vanes, of the feather, when viewed through a microſcope, appear to be a

row of little flat and thin plates, or laminæ, diſpoſed and inſerted in a line as perfect as if their extremities had been cut by the niceſt inſtrument. Each of theſe laminæ is again in itſelf a quill, or baſis, which ſuſtains two new ranks, of a minuteneſs that renders them almoſt inviſible, and which exactly cloſe up all the little intervals through which the air might be inſinuated. The feathers are alſo diſpoſed in ſuch a manner, that the range of the little beards of the one ſlides, plays, and diſcovers itſelf, more or leſs, under the great beards of the other feather that lies over it. A new range of leſſer feathers ſerves as a covering to the quills of the larger. The air is excluded from every part, and thus the impulſe of the feathers on that fluid, becomes very ſtrong and efficacious.

The vanes, or webs, in the flag part of the wing are alſo formed with incomparable nicety: broad on one ſide, and narrower on the other; the edges of the exterior vanes bending downwards, and thoſe of the interior, or wider, upwards, by which they catch hold of, and lay cloſe to each other when the wing is ſpread; and thus not one feather can miſs its impulſe.

This

This economy of the conſtruction of the feathered race, is curiouſly preſerved by an expedient which renders their plumage as impenetrable to the water, as by their ſtructure it is to the air. Whenever the bird feels itſelf likely to be incommoded by rain, or its feathers dry, ſoiled, and diſcontinued by gaps, it has recourſe to a gland, ſituate on its rump, and containing a quantity of oil, which it preſſes out with its bill, and then drawing the bill over the greater part of the feathers ſucceſſively anoints and gives them a luſtre that renders them impervious to damp. This care of their plumage is one of their moſt conſtant employments. Water-fowls are endowed with ſuch a quantity of this unctuous fluid, that it even communicates a degree of rancidity to the taſte of their fleſh; thoſe that inhabit the open air have leſs; and our domeſtic fowls, which live, in a manner, under covert, have the leaſt.

Naturaliſts have varied in their opinions concerning the generation or production of feathers; ſome contend that they are a ſpecies of plants, as having the two great characters of vegetables, *i. e.* that they grow and are not ſenſible; and that they have the characteriſtic parts of plants,

plants, as roots, ſtem, branch, leaves, &c. Others ſeem to be nearer to nature in making feathers to be on birds, what hairs are on other animals.

In effect, feathers appear to be only productions and expanſions of the laſt extreme fibrillæ of the cutis; and hence, upon ſtripping off the cutis, the feathers are likewiſe taken away; juſt as the leaves and fruit follow upon peeling the bark of a tree. Feathers alſo, as well as hairs, ariſe out of pores in the cutis; which pores are not merely apertures, or *foramina*, but a kind of *vaginulæ*, woven of the fibres of the ſkin, which terminate in the oſcula of the internal fibres of the feathers,

The wings of birds are remarkably ſtrong. The flap of a ſwan's wing has been known to break a man's leg; and a ſimilar blow from an eagle has produced inſtant death. They correſpond with the fore-legs of quadrupeds, and ſerve to ſupport and poiſe the body in a fluid ſo much lighter than itſelf, as well as perform the function of oars to advance the body in any direction; at their extremities there is an appendix generally termed the *baſtard wing*; the quills of the wing differ only from the common feather

feather in being larger, and ſpringing from a deeper part of the ſkin, for their ſhafts lay almoſt cloſe to the bone.

The inſtruments of flying are the wings and tail: by the firſt, the bird ſuſtains and wafts himſelf along; and by the ſecond he is aſſiſted in aſcending and deſcending to keep his body poiſed and upright, and to obviate its irregularities and waverings.

It is by the largeneſs and ſtrength of the pectoral muſcles, that birds are ſo well diſpoſed for quick, ſtrong, and continued flying. Theſe muſcles, which in men, are ſcarce a ſeventieth part of the muſcles of the body, in birds exceed and outweigh all the other muſcles taken together: upon which WILLOUGHBY makes this reflection, "that if it were poſſible for man to fly, his wings muſt be ſo contrived and adapted, that he might make uſe of his legs, and not his arms, in managing them."

The flying of birds is thus effected: the bird firſt bends his legs, and ſprings with a violent leap from the ground; then opens or expands the jointures of his wings, ſo as to make a right-line perpendicular to the ſides of his body. Thus being raiſed a little above the horizon

rizon, he vibrates his wings with great force and velocity, perpendicularly againſt the air; which, though a fluid, reſiſts thoſe ſucceſſions and re-acts as much as it is acted on: by ſuch means is the whole body of the bird protruded. The ſagacity of nature is very remarkable in the opening and recovering of the wing for freſh ſtrokes.—To do it directly, and perpendicularly, it muſt needs have a great reſiſtance to overcome: to avoid which, the bony part, or bend of the wing into which the feathers are inſerted, moves ſideways with its ſharp end foremoſt; the feathers following it like a flag.

RAY, WILLOUGHBY, and others, have ſuppoſed the tail to do the office of a rudder, in ſteering and turning the body this way or that; but BORELLI has ſhewn it unfit for any ſuch office. The *flying* of a bird, in effect, is quite a different motion from the ſailing of a ſhip; birds do not vibrate their wings towards the tail, as oars are ſtruck towards the ſtern, but waft them downward; nor does the tail of the bird cut the air at right angles, as the rudder does the water, but is diſpoſed horizontally, and preſerves the ſame ſituation what way ſoever the bird turns.

In

In effect, as a veſſel in the water is turned about on its centre of gravity to the right, by a briſk application of the oars to the left; ſo a bird, in beating the air with its right wing alone, towards its tail, will turn its fore-part to the left: as when in ſwimming, only by ſtriking out with the right arm and leg, we are driven to the left.

But the tail is moſt particularly of uſe in aſſiſting birds to riſe in the air, or to deſcend, and to preſerve their horizontal poſition when flying.

The BONES of birds, though of a ſolidity ſufficient to ſuſtain the ſyſtem of their bodies, are, nevertheleſs, ſo hollow and diminutive, that they ſcarce make any addition to the weight of their fleſh.

The CLAWS, LEGS, WINGS, and BEAKS of all birds are beautifully adapted to their various purſuits. Birds of prey that muſt fly to a conſiderable diſtance to obtain their food, are furniſhed with large ſtrong wings; while domeſtic birds are uniformly the reverſe. The generality of ſmall birds, ſparrows for inſtance, that harbour near our habitations, and pick up grain or crumbs from the table, have a ſmall bill, with ſhort legs and neck;—but the caſe is dif-

ferent with the woodcock, the ſnipe, and a variety that ſeek their aliment very deep in the earth, or amidſt ſlime and mud.

The bill of the woodpecker is very long, and of much ſtrength and ſolidity; his tongue ſharp, extremely long, and armed with little points; this equipage relates to the bird's manner of living and obtaining its prey, which is chiefly little worms or inſects that live in the heart of many branches, or under the bark of old wood. The heron, on the contrary, feeds on frogs, or whatever ſmall fiſh he can pick up in fens, or near the ſhores of rivers or the ſea, he is therefore mounted aloft on very long legs and thighs, almoſt deſtitute of plumage; he has a long neck, with an enormous bill, jagged at the extremity, like hooks, that enable him to ſeize and detain his ſlimy prey. Similar obſervations may be applied to the whole of the feathered race.

The organ of SMELLING is very large, and ſo well provided with nerves as to render this ſenſation very acute. The raven illuſtrates this, who is able to find out his prey, though concealed from his ſight at a conſiderable diſtance.

The

The anterior part of the Eye, inſtead of being globular, as in the human body, turns ſuddenly flat, and becomes but half a ſphere. In the Britiſh Zoology we are told, that "the eye of birds is not more agile than that of other animals, though their ſight is more quick. On the contrary, their eye is quite immoveable, as is that of moſt animals and inſects of the quickeſt ſight."

As many of theſe creatures are continually employed in thickets and hedges, their eyes are ſecured from injuries, as well as too much light, by an elegant mechaniſm. A membrane ariſes from the internal angle, which can, at pleaſure, be made to cover the eye like a curtain. This curtain is neither pellucid nor opaque, both which would have been equally inconvenient; but being ſomewhat tranſparent, allows as many rays to enter as to make any object juſt viſible, and is ſufficient to direct them in their progreſſion. By means of this membrane it is that the eagle is ſaid to look at the ſun.

Birds have no external EAR, but in place thereof a tuft of very fine feathers, covering the auditory paſſage, which readily allows the rays of ſound to paſs them, and likewiſe pre-

vents duſt or inſects from getting in: and a liquor is ſecreted from the external part of the ear, to lubricate the paſſage, and obſtruct the entrance of vermin, &c.

We have, perhaps, been ſomewhat diffuſe on the external conformation of Birds, though the ſubject would have borne us out to a much greater length: our view of the internal ſtructure ſhall be ſufficiently conciſe; as indeed it could ſcarcely prove intereſting to thoſe who have not been accuſtomed to anatomical reſearches.

The gullet runs down the neck of birds, inclining a little to the right ſide, and terminates in the crop, where the food is macerated and digeſted by a liquor ſeparated from the glands, which abound on the internal ſurface of this bag. Paſſing through the remainder of the gullet, it arrives at length to the true ſtomach or gizzard, which conſiſts of two very ſtrong muſcles. The uſe of the gizzard is to compenſate for the want of teeth, which would be needleſs, as they ſwallow their food entire; and it is well fitted for this purpoſe from the great ſtrength it poſſeſſes.

The digeſtion of birds is performed merely by attrition, which is *aſſiſted* by the hard bodies

dies they ſwallow, and which can ſerve for no other purpoſe than to help the trituration of their aliments. After theſe pebbles, by becoming ſmooth, are rendered unfit for this office, they are thrown up by the mouth. Hence fowls that are long confined, though ever ſo well fed, turn lean for want of theſe ſtones to help their digeſtion.

SPALLANZANI entertains a different opinion, and ſays, that pebbles are not at all neceſſary to the trituration of the food of theſe animals. At the ſame time he does not deny that when put in motion by the gaſtric muſcles they are capable of producing ſome effect on the contents of the ſtomach, but is inclined to believe that they are not ſought for and ſelected by deſign, as many ſuppoſe, but becauſe they frequently happen to be mixed with the food.

The lungs are not looſe within the cavity of the thorax, but fixed to the bone all the way; neither are they divided into lobes, as in thoſe animals that have a large motion in their ſpine; but are two red ſpongy bodies, covered with a membrane that is pervious, and which communicates with the large veſicles, or air-bags, that are diſperſed over their whole abdomen; ſome of theſe are even lodged in the fleſhy parts

parts, and ſome in the hollow bones. Concerning the uſe of theſe cavities, Dr. HUNTER conjectures, that they are a kind of appendage to the lungs, by ſerving as reſervoirs of air; that they aſſiſt birds during their flight, which muſt be apt to render frequent reſpiration difficult. Probably this conſtruction of the organs of reſpiration may aſſiſt birds in ſinging, which the Doctor thinks may be inferred from the long continuance of ſong between the breathings of a canary-bird.

The migration of certain ſpecies of birds, at various times, is a ſubject that naturally attracts curioſity. Some birds delight in cold countries, others are pleaſed with temperate climates, or even the hotteſt regions. Some content themſelves with paſſing from one country to another, where the air or aliment attracts them at a certain ſeaſon: others traverſe the ſeas, and undertake ſurpriſing voyages. The fowls of paſſage moſt known are quails, ſwallows, wild ducks, plovers, woodcocks, and cranes.

In the ſpring quails paſs from Africa into Europe, to find a more tolerable and temperate ſummer than they could enjoy in the country from whence they came. Towards the cloſe of autumn they return over the Mediterranean

to

to obtain in Barbary and Egypt a gentle heat, correſponding to the climate they had abandoned, when the ſun was on the other ſide of the equator. The quails, on theſe occaſions, take their flight in troops that reſemble clouds; they frequently cover ſhips, into which, exhauſted by the fatigue of ſo adventurous a flight, they fall down, and become an eaſy prey to the ſailors.

Among the feathered emigrants is generally placed the ſwallow, which are ſaid to leave us about the latter end of September, directing their courſe towards Senegal and the Morocco ſhore; and this fatiguing journey they are ſaid to perform in the ſpace of ſeven days. But, however, common the opinion may be, that this bird emigrates

"To diſtant regions and to warmer climes,"

yet from many circumſtances it ſeems probable that the *houſe-ſwallow* is *not* a bird of paſſage; on the contrary, that it never quits its *natale olum* but remains where it was produced during the winter months, like many other animals, in a ſtate of torpor; and ſo far from being inclined to migrate in ſearch of a more genial climate, is actually capable of exiſting through the winter

winter months amidſt the mud at the bottom of a pond. Leaving aſide leſs reſpectable authority, we ſhall reſt the fact on part of a letter communicated by the Hon. Sam. Dexter, Eſq. to the Preſident of the American Academy of Arts and Sciences, in 1785.

"You know, Sir, that my houſe is near a large river. This river is in many parts ſhallow, and has a muddy bottom. A former neighbour of mine, a plain, honeſt, and ſenſible man, now deceaſed, who lived ſtill nearer to the river, uſed frequently to ſay to me, as the warm weather came on in the ſpring, "It is almoſt time for the ſwallows to come out of the mud, where they have laid all winter." On my calling his philoſophy once and again in queſtion, and ſaying (as I formerly believed) that, doubtleſs, they were birds of paſſage, he has repeatedly aſſured me, he had, in the autumn of many years, ſeen great numbers of them in one day only in each year, and nearly about, but not always on the ſame day of the month, ſitting on the willow buſhes (which by the way they are not wont to reſt upon at other times), on the borders of the rivers, a little after ſun-ſet; that they ſeemed as if their torpi-

tude

tude had already begun, as they would not ſtir from the twigs, which, by the weight of the ſwallows, were bent down almoſt to the water; and that although he had never ſeen them ſink into it, yet he had waited till it was ſo dark that he could not diſcern them at all, and doubted not of their immerſion any more than if he had been a witneſs of it, for he had never obſerved any flying about afterwards, till the return of ſpring. He added, that if, as he wiſhed, I would carefully look out for their reſurrection, he believed it would not be in vain. He had, he ſaid, often taken notice that only a few appeared at firſt, and the main body in about a week after. Although I paid but little regard to it for ſome years, yet I followed his advice at length, and watched for their appearance ſeveral ſeaſons as carefully as I could. I have not indeed beheld them riſing out of the water, yet I and my family have, in more years than one, ſeen, at the proper time of the ſpring, very large flocks of them in my own and in my neighbour's land, ſo near the margin of the river, that from this circumſtance, the appearance of the feathers, and their being unable to uſe their wings as at other times, we concluded they were newly emerged from the water.

When they attempted to fly they could not reach above eight or ten yards before they ſettled on the ground, and then might be drove about like chickens. They appeared unwilling to be diſturbed, and if not frightened by ſome noiſe or motion would cluſter together, ſeeming to want to reſt themſelves, as if feeble or fatigued. They were not entirely recovered from their ſtupor, there was a viſcous ſubſtance on and about their wings, or they were too weak to fly away. We had ſeen none in thoſe years before; but in each of them, after a day or two, they were flying about as uſual in ſummer."

Wild ducks and cranes alſo, at the approach of winter, fly in queſt of more favorable climates: like quails they aſſemble on a certain day, and all of them decamp at the ſame time, generally ranging themſelves in a column like an I, or ſometimes in two lines united in a point like a V reverſed; but many ſuggeſtions have been made on the migration of birds by the fancy of Naturaliſts, that have never been confirmed by the ſanction of experience; we muſt, therefore diſmiſs opinions unſupported by facts.

The

The longevity of birds is very conſiderable: we give the following ſcale on the authority of Linnæus, Buffon, and other celebrated writers on Natural Hiſtory:

An Eagle will live	100 years
A Raven - -	100
A Gooſe - -	70
A Partridge -	25
A Turtle-Dove	25
A Peacock - -	25
A Pigeon - -	8

THE OSTRICH.

This animal *(fig.* 1) has an undoubted claim to ſtand foremoſt in the arrangement of the feathered tribe, not only upon account of the ſuperiority of his ſize, but becauſe he alſo appears to conſtitute that ſhade which Nature has univerſally adopted throughout animated beings, and to form the link between birds and quadrupeds; in the general outline he certainly reſembles the former, and at the ſame time poſſeſſes many of the characteriſtics of the latter, eſpecially in the internal formation, which may be ſaid to have as great a ſimilarity to the one as the other; it is alſo the ſame with the external covering, which, although a kind of plumage, has as near a reſemblance to hair as to feathers.

Conſidering him, however, as belonging to the race of birds, the oſtrich is, by far, the largeſt of that ſpecies, generally meaſuring ſeven feet from the ground to the top of his head;

FIG. 1.

The Ostrich.

FIG. 2.

The Castowary.

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head; his neck, however, which is ſhaped ſomewhat like that of a ſwan, uſually meaſures three feet, ſo that reckoning their height by the top of the back they ſeldom are more than four feet; and from this cauſe it is that they have been compared by ſome travellers, when ſpeaking of their height, to that of a man on horſeback. From the extremity of the head, which, with the bill, is ſhaped like that of a duck, to the origin of the tail, the neck being ſtretched out, is full ſix feet, and the tail about one; the wings about a foot and a half each when deſtitute of feathers, and nearly three feet when in full plumage.

They are moſtly black and white, ſome have been ſeen of a grey colour, but they are very few: their largeſt feathers are at the extremities of their wings and tails, which are commonly white; theſe are followed by a row of black and white, and all the other ſmall feathers are indifferently, ſome black and others white. They have no feathers on their ſides, thighs, nor under their wings. Thoſe on the long part of the neck are alſo black and white, and are much ſmaller than thoſe either on the back or belly. Their feathers are all of the ſame kind, a circumſtance peculiar to the

the oſtrich, for other birds have various ſorts, ſome being ſoft and downy, and others harſh, hard and ſtrong: the whole of theſe, however, are nearly as ſoft as down, and therefore can neither aſſiſt the animal in flying, nor defend it from any injury. Another peculiarity in their feathers is the ſtem being exactly in the middle; while all other birds have the webs broader on one ſide than the other. The head and upper part of the neck are covered with a beautiful fine gloſſy hair, with a number of ſmall tufts ſcattered in different places, compoſed of ten or a dozen hairs, which grow from a ſingle ſhaft, not much thicker than a pin.

They have a ſtrong ſpur of about an inch long ſomewhat like the quill of a porcupine at at the end of each wing; which are hollow and of an horny ſubſtance. About a foot lower alſo on each wing, they have another of theſe horny projections, but theſe are not near ſo large as the others. The ſkin of the neck is of a livid fleſh colour, ſo as to have been conſidered by ſome as a light blue; and from not being covered with feathers, the neck itſelf has the appearance of being more ſlender in proportion than that of any other bird. They have alſo

proportionally

proportionally a very ſhort pointed bill. The external form of their eye is like that of man, the upper eye-lid being furniſhed with much longer eye-laſhes than thoſe on the under one. Their tongues are but ſmall, very ſhort, and compoſed of cartilageous ligaments and membranes, intermixed with fleſhy fibres; ſome of them have it about an inch long, and very thick at the bottom, while in others it is not more than half an inch, and a little forked at the end.

They have very large fleſhy thighs, which are in general covered with a ſkin inclining to red, and ſo much wrinkled as to have the appearance of a net whoſe meſhes will admit the end of a finger; there are ſome indeed who have a few ſcattered feathers thereon, and others whoſe thighs have neither feathers nor are wrinkled. Their legs in the front are covered with very large ſcales; their feet are cloven, and have two large toes, which are alſo covered with ſcales; theſe toes are not of an equal ſize, the inſide one being by much the largeſt, meaſuring ſeven inches in length, including the claw, which is about three-fourths of an inch long and broad, whereas the other toe

is

is not above four inches in length, and without any claw.

With reſpect to the internal parts of this animal, its ſtructure ſeems to be arranged with aſtoniſhing peculiarity. For inſtance, under the ſkin, at the top of the breaſt, there is a ſubſtance of fat at leaſt two inches thick; and the fore part of the belly is covered with fat more than half an inch thicker, and which is there as hard as ſuet. It has two diſtinct ſtomachs; the firſt, which is in the natural ſituation, and which is the loweſt, may, in ſome meaſure, be compared to the crops in other birds; it is conſiderably larger than the other, and is furniſhed with ſtrong muſcular fibres, which are placed both circular and longitudinal. The ſecond ſtomach, or gizzard, in its outward form reſembles that of the human race, and which, upon being opened, is always found to contain a variety of ſubſtances, ſuch as hay, graſs, barley, beans, bones, and ſtones, ſome of which frequently exceed the ſize of a pullet's egg. The kidneys of the oſtrich are eight inches long and two broad, differing from thoſe of other birds, by not being divided into lobes; the heart and lungs are ſeparated by a midriff,

midriff, as in quadrupeds, and with whom alſo their generative organs bear a ſtrong reſemblance.

The oſtrich is a native of the torrid regions of Africa, and is peculiarly adapted for living among the ſchorching ſands, and braving the burning heats, of thoſe inclement deſerts, from which it is ſcarcely known to wander, being never met with in climates more mild and temperate. It is, however, been long and well known, as moſt travellers in that country have mentioned it among the other animals; and it is even ſpoken of in the Scriptures, where its fleſh is proſcribed as improper for food. Like the elephant it has preſerved its race uncontaminated, never intermixing with any other; nor has it even been known to breed out of thoſe regions, from whence it drew its origin, and whoſe intemperature ſeems ſo congenial to its nature. It is in theſe countries that the elephant, rhinoceros, and camel, more particularly reſort, and therefore it is matter of leſs aſtoniſhment that they ſhould alſo afford a retreat for the oſtrich; they all prefer the moſt ſolitary deſerts, where they are moſt ſecure from diſturbance, although the ſurface of the earth

is nearly barren, almoſt without vegetables, and the rains never come to refreſh it. It is aſſerted by the Arabians that the oſtrich never drinks, and from the nature of the place it inhabits we are almoſt induced to believe the aſſertion. In theſe tremenduous deſerts the oſtriches roam about together in conſiderable flocks, and when at a diſtance have ſo much the appearance of men on horſeback that many a carravan has been alarmed by them, upon the ſuppoſition of their being a regiment of cavalry. There is no deſert, however barren, but what poſſeſſes ſufficient to ſupply them with proviſions, for they eat almoſt any thing, and therefore theſe, which to all other beings are inhoſpitable tracts, afford them food and ſecurity. Of all the ſpecies of animals the oſtrich is the moſt voracious; he indiſcriminately takes up and ſwallows gravel, ſtones, glaſs, leather, or, in ſhort, almoſt any thing that comes in his way; and with which voracity his powers of digeſtion are equal, that is, with all ſuch things as are digeſtible; but glaſs, ſtone, iron, and other ſubſtances which will not ſoften, paſs whole, and are voided in the ſame forms that the animal ſwallowed them.

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It is moſt certain that any metal being ſwallowed by an animal, loſes part of its weight in the paſſage: it is poſitively aſſerted that a quarter piſtole, which was ſwallowed by a duck, loſt ſeven grains of its weight in the gizzard before it was voided, and it is therefore very probable, from the ſtrength of the ſtomach, that the diminution would be proportionably greater in that of the oſtrich, and thus far it may be ſaid to digeſt iron; but even ſuppoſing the capability, theſe ſubſtances do not continue a ſufficient time in the body to undergo ſuch a diſſolution. This vulgar concluſion is in a great meaſure confuted by Barbot in his Deſcription of North Guinea, wherein he relates that the ambaſſador who was ſent from Morocco to the States General of the United Provinces in the year 1659, brought over to Holland, among other varieties of thoſe countries, as a preſent, an oſtrich, which died in Amſterdam through ſwallowing nails, which the people continually ſupplied it with, upon the ſuppoſition that it could digeſt iron like bread; and as a proof of this being the cauſe of its death, he ſtates, that upon being opened there were above eighty nails found entire in its ſtomach. Ranby and Valiſnieri in ſeveral

which they diſſected, always found the ſtomachs overloaded with a variety of ſubſtances, ſuch as glaſs, ſtones, iron, wood, &c. nay, the latter poſitively affirms, that in one of them he found a piece of ſtone which weighed upwards of a pound. From the whole of the accounts, there appears ſome reaſon to conclude that, in ſwallowing theſe different articles, they are actuated by the ſame neceſſity which obliges the ſmaller birds to pick up gravel, namely, to keep the coats of the ſtomach aſunder; or it may poſſibly ariſe from a preying deſire, which may keep it perpetually uneaſy, unleſs the great capacity of its ſtomach is filled up, and therefore to acquire reſt, nutritious ſubſtances not being acquirable, it ſwallows whatever comes in its way.

From the moſt authentic accounts it appears that in their native abodes theſe animals principally feed on vegetables, after which they are in continual purſuit; there they live an inoffenſive and ſocial life, and, according to Thevenot, the males and females adhere to each other with an uncommon degree of connubial fidelity. They are much inclined to venery, and the females lay very large eggs, ſome of them being five inches in diameter, and weighing

weighing upwards of fifteen pounds. The ſhells of them are extremely hard, and ſomewhat reſemble thoſe of the crocodile, excepting that the latter are not quite ſo large, and are more round. The time of producing, however, depends in a great meaſure on the climate in which they reſide; in the northern parts of Africa they lay about the beginning of July, and in the ſouthern not before the latter end of December. They are exceedingly prolific, and commonly lay from forty to fifty eggs in a ſeaſon.

It has been aſſerted by moſt antient writers that the female depoſits them in the ſand, and then covering them up, leaves them to be hatched by the heat of the ſun; that ſhe is totally regardleſs of her young, and from the firſt moment leaves them to ſhift from themſelves. But perſevering enquiry has proved theſe aſſertions have little or no foundation in truth, and that no bird watches her eggs with more care, or attends her young with more tender aſſiduity. It is true, that ſhe more frequently leaves her eggs, but then it is no leſs certain that in thoſe hot climates there cannot be a real neceſſity for conſtant incubation, and that they run no hazard of being chilled by the weather;

weather; beſides, this abſence is always in the day, and ſhe invariably broods over them during the night; a fact that we have fully confirmed by Kolbe, and who alſo ſays, that he had frequent opportunities of ſeeing them while at the Cape of Good Hope, that they ſit upon their eggs like other birds, and that the males and females perform this office by turns. The charge of their forſaking their young is no leſs untrue, and this is moſt clearly eſtabliſhed by their not being able to walk for ſeveral days after they come out of the ſhell; at this time the old ones attend them with great attention, affiduouſly ſupply them with graſs, and courageouſly defend them from all danger; when firſt hatched they are of an aſh-colour, and covered all over with feathers; but theſe drop off in the courſe of the firſt year, and they afterwards acquire the plumage we have already deſcribed.

It is by the beauty of their plumage man has been tempted to harraſs theſe harmleſs animals, even in the dreary deſerts, and to purſue them both with labour and expence. Nor is this a perſecution to which they have been recently ſubjected; for the ancients were equally deſirous of obtaining their plumes to decorate

their

their helmets; the ladies of the East have long made them an ornament of their dress, and in modern days they have been esteemed as elegant ornaments by the principal persons in almost all parts of Europe. Those who hunt these animals pluck out their plumes the instant they are caught, as those taken out while the ostrich is alive, are held in most estimation; for when drawn after its death, they are dry, light, and subject to decay.

Some of the savage nations of Africa hunt them also for their flesh, of which they are very fond; so much so indeed that particular tribes have acquired the name of Struthophagi (ostrich-eaters), from their peculiar fondness for its flesh. Even the Romans appear to have considered it as a dainty, for Apicius has left a receipt for making a particular sauce for the ostrich; and it is recorded of Heliogabalus that he had the brains of six hundred of these animals, at a feast, served up in one dish.

The spoils of the ostrich are so valuable that it is no wonder the human race, who reside in the vicinity of his resorts, have become his declared enemies, and constant pursuers. The Arabs are so sensible of its value that they train up their best and fleetest horses for the purpose of

of hunting them, and which, of all the various modes of the chace, is, perhaps, the moſt entertaining; for the game is always kept in view. The method they purſue is this; when the hunters come in ſight of their prey they put their horſes on a gentle gallop, ſo as juſt to keep him in ſight, for if they were to alarm him he would quit the plains for the mountains, and which they would not be able to prevent, as of all animals that go upon their legs he is by much the ſwifteſt. Alonzo de Ovallo, in his Deſcription of Chili, ſays, that although the oſtriches do not fly yet they are ſo ſwift that it is ſeldom that even the greyhounds can overtake them; and when they happen to be come up with by ſurpriſe, their art in defending themſelves is no leſs aſtoniſhing than their ſpeed, for when the dog is going to ſeize him the oſtrich lets down one of his wings, fixes it on the ground, and with it ſhades his whole body; the dog, eager of his prey, runs at him with open mouth, which he entirely fills with feathers; the oſtrich ſets off on the inſtant, and before the dog can extricate himſelf from his diſappointment, has generally got to a ſufficient diſtance to effectuate his eſcape. But to return: the oſtrich perceiving himſelf followed,

though

though at a diſtance, ſets off at firſt but at a gentle pace, as if inſenſible of his danger, or ſure of eſcaping. In this running he keeps his wings, like arms, in a conſtant motion exactly correſponding with that of his legs, and which ſpeed would be perfectly ſufficient to eſcape from his purſuers, if he went off in a direct line, but unfortunately for his own ſafety he takes his courſe in extenſive circles, in which manner the hunters continue their purſuit, but on a ſmaller ſcale, and alſo by relieving each other they are conſtantly coming near, and by that means keep him inceſſantly running for two or three days together. At laſt worn out by fatigue and hunger, and conceiving it impoſſible to eſcape by this means, he reſolves to conceal himſelf from thoſe enemies which he has ſo long in vain endeavoured to avoid. And here alſo he appears to be no leſs deficient in faculties than in his mode of exerciſing his ſpeed, for his method of concealment is by covering his head with the ſand, or running it into the firſt thicket he comes near, and where he patiently waits until he is taken by his purſuers. Sometimes, however, they ſtand upon their defence, and although naturally one of the moſt timid animals in Nature in this caſe they

act with deſperation, and defend themſelves with their beaks, wings, and feet; and ſuch is their power that a man is unable to withſtand their force.

When the Arabians take an oſtrich in this manner, they immediately cut his throat, and making a ligature below the opening, they keep the body of the bird in continual motion for ſome time, and then taking off the ligature, there runs out from the wound a conſiderable quantity of blood mixed with the fat of the animal which they conſider as one of the greateſt delicacies. Having plucked out its beſt plumage they then take off the ſkin, which is ſtrong and thick, and is uſed by them for various purpoſes. The Arabians alſo ſeek after their eggs, the contents of one being a ſufficient repaſt for at leaſt eight men.

A very different method is adapted by the Struthophagi to take this animal, and what the Arabian accompliſhes by labour they atchieve by art. Having obtained an oſtrich's ſkin they cover themſelves with it, and putting one of their arms up its neck, counterfeit all the actions of a living animal. By this means they unſuſpected approach the victim of their purſuit, and who, of courſe, falls an eaſy prey. Dogs

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and nets are alſo made uſe of to take them, but the moſt uſual methods are thoſe which we have above deſcribed.

They are not, however, purſued by all for immediate deſtruction, as there are thoſe who hunt them for the purpoſe of rendering them tame, that they may thereby obtain a ſupply of thoſe feathers which are held in ſo much eſtimation; and this is accompliſhed with very little trouble. The inhabitants of Dara and Lybia keep conſiderable flocks of them; and, according to the accounts of ſeveral travellers, in this domeſtic ſtate they are alſo made very uſeful. Moore relates that at Joar in Africa he met a man travelling upon an oſtrich; and M. Adanſon ſays, that when he was at the factory of Podore there were two young oſtriches, the ſtrongeſt of which was much fleeter than the beſt Engliſh race-horſe he ever ſaw, although he at the time carried two negroes on his back. Whether this ſtrength and ſwiftneſs will ever render the animal uſeful to mankind in that reſpect is a matter of much doubt. It is very true, ſays M. de Buffon, that poſterity may be inclined to take advantage of this creature's abilities, but it is more than probable that it will be many ages after, before this will become

the favourite, although the ſwifteſt mode of conveyance.

There are many parts of this animal which are ſuppoſed to be very ſalutary for medicinal purpoſes; the fat is conſidered to be emolient, and relaxing, ſo much ſo that while it relaxes the tendons it fortifies the nervous ſyſtem, and being applied to the region of the loins it eaſes the poignant pain of the ſtone in the kidneys; and the ſhell, powdered, and taken in proper quantities, is conſidered as an excellent ſpecific for promoting urine and diſſolving the ſtone in the bladder; and the ſubſtance of the egg itſelf, has been ſtated as poſſeſſing a peculiar nutritive quality, but this, however, is rejected by Galen, who, when treating on this ſubject, ſays, "the eggs of hens and pheaſants are good, but thoſe of geeſe and oſtriches had better not be eaten."

THE EMU.

THIS bird is a native of the New Continent, and is inferior in ſize to none but the oſtrich, to which indeed all travellers ſeem to have been more deſirous of approximating its affinities than in pointing out its pecularities. They are chiefly found along the banks of the Oroonoko, in Guiana, in the inland provinces of Braſil and Chili, and in the immenſe foreſts adjacent to the mouth of the river Plata. They were formerly in many other parts of South America, but as population increaſed and the inhabitants multiplied theſe timid animals, at leaſt ſuch as could eſcape the deſtructive power of men, fled from the vicinity of their habitations.

The Emu is not only a native but by much the largeſt bird in the New Continent; they are generally ſix feet high, meaſuring from the head to the feet. Their legs are three feet long, and their thighs are near as thick as thoſe of a man. Their toes differ from thoſe of the oſtrich, they have

have three upon each foot, whereas the latter have but one. This bird has a long neck, ſmall head, and the bill flatted, like that of the oſtrich; but in all other reſpects it more reſembles the Caſſowary. The form of the body is an oval, but it appears perfectly round: its wings are very ſhort, and it has not any tail. The back and rump is covered with long feathers, which fall backward, and cover the anus: theſe feathers are grey upon the back, and white upon the belly. It is very ſwift in its motions, and ſeems aſſiſted in its pace by a kind of tubercle behind, like an heel, upon which, on plain ground, it treads very ſecurely; in its courſe it uſes a peculiar kind of action, lifting up one wing, which it keeps elevated for a time, and then letting that drop, it lifts up the other. What particular advantage it derives in thus keeping only one wing elevated is not eaſy to diſcover; whether it ſerves the purpoſe of a ſail to catch the wind, or as a rudder to guide its courſe, in order to avoid the arrows of the Indians, yet remains to be aſcertained; however this be, the emu runs with ſuch a ſwiftneſs, that the fleeteſt dogs are thrown out in the purſuit. It is related of one of them, that finding itſelf ſurrounded by the hunters,

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it darted among the dogs with ſuch fury that they made way to avoid its rage; and that by its amazing ſpeed it afterwards eſcaped in ſafety to the mountains.

This bird being but little known, travellers have indulged their imaginations in deſcribing ſome of its actions. "This animal, ſays Nieremberg, is very peculiar in the hatching of its young. The male compels ſeveral of the females to lay their eggs in one neſt; he then, when they have done laying, drives them away, and places himſelf upon the eggs: taking the precaution, however, of rolling two of the number to ſome little diſtance. When the young ones come forth, theſe two eggs of courſe are addled; which he having foreſeen, breaks one, and then the other; theſe attract multitudes of flies, beetles, &c. which ſupply the young brood with a ſufficiency of proviſions, until they are able to ſhift for themſelves."

Wafer, on the other hand aſſerts, that he has ſeen great quantities of theſe animal's eggs buried in the ſand on the deſert ſhores, north of the river Plata, in order to be hatched by the heat of the climate, But both theſe accounts may be doubted; and it is more probable that

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it was the crocodiles eggs which Wafer ſaw, and which are moſt aſſuredly left in the ſand by theſe animals, and are rendered productive by the heat of the ſun alone.

This latter author further adds, that when the young ones are hatched, they are ſo familiar that they will follow the firſt perſon they meet. "I have been followed myſelf, ſays Wafer, by many of theſe young oſtriches; which, at firſt, are extremely harmleſs and ſimple; but as they grow older, they become more cunning and diſtruſtful, and run ſo ſwift, that a greyhound can ſcarcely overtake them." Their fleſh, in general, is good to be eaten, eſpecially if they be young, and it would be no difficult matter to rear up flocks of them tame, particularly as they are naturally ſo familiar; and they might be found to anſwer domeſtic purpoſes, like the hen, or the turkey. Their maintenance could not be expenſive, if, as it is poſitively aſſerted, they live entirely upon graſs.

THE CASSOWARY.

THE Caſſowary (*fig.* 2) is a native of the Iſles of Sumatra, Banda, and the other adjacent Mollucca Iſlands, it was firſt brought into Europe by the Dutch, from Java, in the Eaſt Indies, and is by them called the Caſuaris.

Though not ſo large as the Emu, it yet appears more bulky to the eye; its body being nearly equal, and its neck and legs much thicker and ſtronger in proportion; this conformation gives it an air of ſtrength and force, which the fierceneſs and ſingularity of its countenance conſpire to render formidable. M. de Buffon ſays, that the one mentioned by the gentlemen of the French Academy was five feet and an half long, from the point of the bill to the extremity of the claws, and about three feet from the breaſt to the end of the rump, for it has no tail. The head and neck meaſured

from a foot and an half to two feet; the legs were two feet and an half high, from the belly to the end of the claws; they were exceedingly groſs, and covered with a yellowiſh rind; their feet were thick, knobbed, and without ſpurs; inſtead of which they had on the fore-part three long horny claws: the largeſt toe, including the claw, was five inches long, and the claw alone of the leaſt toe, three inches and an half in length. Their wings are ſo ſmall, and being hid under the feathers of the back, they are ſcarcely perceiveable. In other birds, a part of the feathers ſerve for flight, and are different from thoſe that ſerve for merely covering; but in the caſſowary all the feathers are of the ſame kind, and outwardly of the ſame colour, a dark red mixed with black. They are generally double; having two long ſhafts, which grow out of a ſhort one, which is fixed in the ſkin. Thoſe that are double, are always of an unequal length; for ſome are fourteen inches long, particularly on the rump, while thoſe on the breaſt, back, and thighs, are not above three. The beards that adorn the ſtem or ſhaft, are from about half way to the end, very long, and as thick as an horſe hair, without being ſubdivided into fibres. The

ſtem or ſhaft is flat, ſhining, black, and knotted below; and from each knot there proceeds a beard, which as well as thoſe at the end of the large feathers, are perfectly black; towards the roots they are of a grey tawny colour; ſhorter, more ſoft, and throwing out fine fibres, like down; ſo that nothing appears except the ends, which are hard and black, the other part, compoſed of down, being quite covered. They have feathers on the head and neck; but thoſe are ſo ſhort, and thinly ſown, that the ſkin appears naked, except towards the hinder part of the head, where they are a little longer. The feathers which adorn the rump, are very thick, but do not differ, in other reſpects, from the reſt, excepting their being longer. The wings, when they are deprived of their feathers, are but three inches long; and the feathers are like thoſe on other parts of the body. The ends of the wings are adorned with five prickles, of different lengths and thickneſs, which bend like a bow: theſe are hollow from the roots to the very points, having only that ſlight ſubſtance within which is common to all quills. The longeſt of theſe prickles is eleven inches, and a quarter of an inch in diameter at the root, being thicker

there than towards the extremity, and is ſo blunt at the end that the point ſeems broken off.

This animal, however, is moſt diſtinguiſhed by the head, which, though ſmall, like that of the oſtrich, does not fail to inſpire ſome degree of terror. It is bare of feathers, and is in a manner armed with an helmet of horny ſubſtance, that covers it from the root of the bill to near half the head backwards. This helmet is black before and yellow behind. Its ſubſtance is very hard, being formed by the elevation of the bone of the ſkull, and conſiſts of ſeveral plates, one over another, like the horn of an ox. It has been ſuppoſed by ſome authors that this was ſhed every year with the feathers; but the moſt probable opinion is, that it only exfoliates ſlowly like the beak. To the peculiarity of this natural armour may be added the no leſs ſo of the colour of the eye, which is a bright yellow, and the globe being above an inch and an half in diameter, give it an air equally fierce and extraordinary. At the bottom of the upper eye-lid, there is a row of ſmall hairs, and over them there is another row of black hairs, which have much the appearance of eye-brows. The lower eye-lid, which is

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the largeſt, is alſo furniſhed with plenty of black hair. The holes of the ears are cloſe behind the eyes, are very large and open, being only covered with ſmall black feathers. The ſides of the head are deſtitute of any covering, and are of a dark blue colour, except the middle of the lower eye-lid, which is white. The upper part of the bill is very hard at the edge above, and the extremity of it is like that of a turkey-cock. The end of the lower mandible is ſlightly notched, and the whole is of a greyiſh brown, except a green ſpot on each ſide; the beak admits of a very wide opening, and which contributes not a little to the bird's menacing appearance. The neck is of a violet colour, inclining to that of ſlate; with a tincture of red behind in ſeveral places, but chiefly in the middle. About the middle of the neck before, there are two proceſſes formed by the ſkin, which reſemble ſomewhat the gills of a cock, but that they are blue as well as red. The ſkin which covers the fore-part of the breaſt, on which this bird leans and reſts, is hard, callous, and without feathers. The thighs and legs are covered with feathers, and are extremely thick, ſtrong, ſtraight, and covered with a kind of ſcales, but the legs are

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thicker a little above the foot than in any other place. The toes are likewiſe covered with ſcales, and are but three in number, all of which are in the front; they are ſeverally armed with claws of a hard and ſolid ſubſtance, black without and white within.

The caſſowary has alſo a very ſingular internal conformation, for it unites with the double ſtomach of animals that live upon vegetables, the ſhort inteſtines of thoſe that live upon fleſh. Its inteſtines are extremely ſhort, and its heart is not more than an inch and an half long, nor above an inch broad at the baſe.

With ſome degree of propriety it has been remarked by a celebrated author, that the caſſowary has the head of a warrior, the eye of a lion, the defence of a porcupine, and the ſwiftneſs of a courſer; and yet though thus formed for a life of hoſtility, for terrifying others, and for its own defence, and from which it might be ſuſpected of being one of the moſt fierce and terrible animals of the creation, nothing is ſo oppoſite to its natural character; it ſeems to be ſolicitous after peace and quiet for itſelf, and never gives diſturbance to any; even when attacked, inſtead of

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employing its bill, though ſo well calculated for defence, it rather makes uſe of its legs and feet, kicking like an horſe, or running againſt its purſuer, beating him down to the ground, and then endeavouring its eſcape. The method of its running has a ſtrange appearance, for it does not go directly forward, but kicks up behind with one leg, and then making a bound onward with the other, proceeds with ſuch prodigious velocity, that the ſwifteſt racer would be unable to maintain the purſuit.

The caſſowary is equally as voracious as the oſtrich, and ſwallows every thing that comes within the capacity of its gullet. The Dutch travellers aſſert that it can devour not only glaſs, iron, and ſtones, but even live and burning coals, without teſtifying the ſmalleſt fear, or feeling the leaſt injury. It is ſaid that the paſſage of the food through its gullet is performed ſo ſpeedily, that even eggs, which it may have ſwallowed, will paſs through unbroken, and in the ſame form they went down. The alimentary canal of this animal being, as we before obſerved, ſo extremely ſhort, it is poſſible that many kinds of food are indigeſtible in its ſtomach, as wheat or currants, when ſwallowed whole, are in thoſe of the

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human race. Their eggs, which are not ſo large nor ſo round as thoſe of the oſtrich, are of a greyiſh-aſh colour, ſomewhat inclining to green, ariſing from their being marked with a number of little tubercles of a deep green; the ſhell is not very thick, and the largeſt meaſure fifteen inches round one way, and about twelve the other.

This bird is a native of the ſouthern parts of the moſt eaſtern Indies, and his favorite climate ſeems to begin where that of the oſtrich terminates. The latter has never been found beyond the Ganges; while the caſſowary is never ſeen nearer than the iſlands of Banda, Sumatra, Java, the Molucca Iſlands, and the correſponding parts of the continent; and even there they are not now, by any means, plenty, as it is no very diſtant period when one of the kings of Java made a preſent of one of theſe birds to the captain of a Dutch ſhip, conſidering it as a very great rarity. They are ſpoken of as having been formerly more numerous, and their preſent ſcarcity is probably owing to the conſtant perſecutions of man: and thus the ſpecies of the caſſowary, like that of many other, animals who belong to inhabited regions, is ſuffering daily diminution, while

while the oſtrich, by continuing in the deſerts and unpeopled regions of Africa, ſtill preſerves his race equally numerous, and ranges at large the unrivalled tenant of his own inhoſpitable climate.

THE DODO.

TO judge of this bird from the characteriſtics of its feathers, wings, ſwallowing hard ſubſtances, and ſome other trifling ſimilarities, we ſhould be induced to ſuppoſe that he has ſome pretenſions to rank in the oſtrich genus, but with whom, in regard to ſize, he is a mere pigmy; and ſo far from exciting the idea of ſwiftneſs (an idea which naturally ariſes in conſidering the feathered race) he has the evident appearance of being one of the moſt unwieldy and inactive creatures formed by Nature. Its body is maſſive, almoſt round, and covered with ſoft, grey feathers, which is ſupported upon two ſhort yellow legs, not more than four inches long, and as much in circum-

ference, and from which its head and neck riſe in a manner truly groteſque; it has a thick clumſey neck, and a very large head, which conſiſts of two great chaps, that open far behind the eyes, ſo that the animal, when it gapes, ſeems to be all mouth. The bill is of an extraordinary length, not flat and broad, but thick, and of a bluiſh white, ſharp at the end, and each chap crooked in oppoſite directions, reſembling two pointed ſpoons that are laid together by the backs. From all this reſults a ſtupid and voracious phyſiognomy, which is ſtill more encreaſed by a bordering of feathers round the root of the beak, ſomewhat in appearance like an hood, and from which circumſtance it has ſometimes been called the Monk-ſwan. Bulk, which implies ſtrength, in this animal only contributes to inactivity. Neither the oſtrich nor caſſowary are able to fly, but then they ſupply that defect by their ſpeed in running, while the dodo ſeems weighed down by its own heavineſs, has ſcarce ſtrength to urge itſelf forward, and moves ſo ſlow that it is very eaſily taken. It ſeems among birds what the ſloth is among quadrupeds, an unreſiſting animal, equally incapable of flight or defence. It has ſmall wings, covered with

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ſoft aſh-coloured feathers, but which are too ſhort and too weak to aſſiſt it in flying. Its tail conſiſts of a few ſmall curled feathers, of the ſame colour. Its legs are too ſhort for running, and its body too fat to be ſtrong; it has four toes upon each foot, three before and one behind; each of which are armed with pretty long claws.

The dodo is a native of the Iſle of France; and the Dutch, who firſt diſcovered it there, called it, in their language, the *nauſeous bird*, as well from its diſguſting figure as from the bad taſte of its fleſh. However, ſucceeding obſervers contradict this firſt report, and aſſert, that its fleſh is good and wholeſome eating, and that three or four of them contain ſufficient ſubſtance to dine an hundred men; but it is commonly ſalted and ſtored up for ſea proviſions.

TWO other birds have been mentioned by travellers, the one under the name of the *Solitary*, and the other the *Bird of Nazareth*; but there is great reaſon to believe they are merely varieties of the ſpecies of the dodo. The firſt is

found in the Iſle of Roderique, and its deſcription ſcarcely varies from the one we have juſt treated of; but from being more known ſome particulars are mentioned which have not been ſo clearly aſcertained in the Dodo; ſuch, for example, that they lay but one egg, and upon which they ſit ſeven weeks; that they hatch towards the end of the year, and are much ſought after by the inhabitants, from March to September, when they are very fat, and excellent food.

The *nazarene*, or *bird of Nazareth*, is found in the Iſle of France, though ſuppoſed to be a native, and which indeed the appellation given it ſeems to imply, of the Iſle of Nazareth. It is deſcribed as being larger than a ſwan, with the bill bent a little downwards; that the body of it is covered over with a blackiſh down, but that it has ſome frizzled feathers on the wings and rump.

OF RAPACIOUS BIRDS.

IT is the ſame among the various ſpecies of birds as it is with thoſe of quadrupeds, ſome claſſes being formed with carnivorous appetites, which lead them to ſeek the deſtruction of thoſe they can ſubdue, while others are of a more gentle diſpoſition, and harmleſsly feed upon the productions of the earth; and thus, by peopling the woods with inhabitants of different diſpoſitions, Nature has wiſely provided for the multiplication of all; ſince, could we ſuppoſe there were as many animals produced as there were vegetables ſupplied to ſuſtain them, yet we ſhould ſtill find another claſs of animals that would procure a ſufficient ſuſtenance by feeding upon the vegetable feeders, either by deſtroying them through a rapacious diſpoſition, or feaſting on ſuch as happen to fall by the courſe of Nature. By this contrivance a greater multiplication is maintained, for certainly the number of animals would be

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but ſmall were every one a candidate for the ſame food. Thus, by ſupplying a variety of appetites, has Nature provided for increaſing and ſuſtaining the multiplicity of her living productions.

Nature, however, has not contented herſelf by varying their appetites, but ſhe has alſo varied their forms; and while ſhe has given ſome animals an inſtinctive paſſion for animal food, ſhe has alſo furniſhed them with powers to obtain it. All land-birds of the rapacious kinds are furniſhed with large heads and ſtrong crooked beaks, notched at the ends, completely adapted, as it were, for the purpoſe of tearing their prey. They have ſtrong ſhort legs, and ſharp crooked talons, which ſerve the purpoſe of ſeizing it. Their bodies are formed for war, being fibrous and muſcular; and their wings, for ſwiftneſs of flight, being well feathered and expanſive. Thoſe that ſeek their prey by day have an aſtoniſhing quick ſight, while ſuch as ravage by night have a ſight ſo calculated as not to be obſcured by the ſhadows of darkneſs.

For the digeſtion of animal food their internal parts are equally formed. Their ſtomachs are ſimple and membranous, are wrapped in fat

fat to increaſe by warmth the powers of digeſtion, and their inteſtines are ſhort and glandular. Their food being ſucculent and juicy they want no length of inteſtinal tube to form it into proper nouriſhment; nor does fleſh require a ſlow digeſtion to be converted into a ſimilitude of ſubſtance to their own.

Theſe rapacious ſpecies being thus formed for war, they lead a life of ſolitude, ſeeking out habitations in the moſt lonely places, either in the moſt deſert plains or inacceſſible rocks and mountains. They make their neſts in the clefts of rocks, or on the tops of the higheſt trees of the foreſt. Whenever they appear in the cultivated plain, or the ſequeſtered grove, it is only for the purpoſes of depredation, and are ever gloomy intruders on the general joy of the harmleſs choriſters; among whom they ſpread univerſal terror and diſmay: all that variety of muſic, which but a moment before enlivened the grove, at their appearance is inſtantly at an end; each individual ſeeks for ſafety, either by concealment or flight; ſome fall and lay inanimate upon the earth, while others even venture to truſt themſelves in the habitations of men, to avoid their moſt mercileſs enemies. In general, however, the carnivorous

vorous bird declares war only againſt ſuch as are in proportion to his ſize; the eagle diſdains to deſtroy the lark, but purſues the buſtard or pheaſant, while the ſparrow-hawk is the conſtant foe of the thruſh and the linnet. Nature has alſo provided that each ſpecies ſhould make war only on ſuch as are furniſhed with means of eſcape. The ſmalleſt birds avoid their purſuers by their extreme agility rather than the ſwiftneſs of their flight, for no one could poſſibly eſcape if the eagle, to its own ſwiftneſs of wing, added the verſatility of the ſparrow.

The deſtructive tyranny of theſe animals is alſo more ſupportable from their being leſs fruitful than other birds, and breeding but few at a time. Thoſe of the larger kind ſeldom produce above four eggs, and often but two; and thoſe of the ſmalleſt never above ſix or ſeven. The pigeon, it is true, which is their prey, never brings forth above two at a time; but then ſhe breeds every month in the year, whereas carnivorous kinds only breed annually, and of conſequence their fecundity is ſmall in compariſon.

Being fierce by nature, they extend this ſavage diſpoſition even to their young, which they force from the neſt at a very early period.

Other

Other birds ſeldom forſake their young till completely able to provide for themſelves; but the rapacious kinds expel them from the neſt at a time when they ſtill want protection and ſupport. This ſeverity to their young proceeds from the urging neceſſity they feel of providing for themſelves. All animals that, by the conformation of their ſtomach and inteſtines, are formed to live upon fleſh, and ſupport themſelves by prey, though they may be mild when young, become fierce and miſchievous by the habit of uſing thoſe arms with which they are ſupplied by Nature. As it is only by the deſtruction of other animals that they can ſubſiſt, they become more furious every day; and even the parental feelings are overpowered in their general habits of cruelty; and it is principally from this cauſe, that if they find it difficult to procure a neceſſary ſupply, the old ones ſoon drive their brood from the neſt to ſhift for themſelves, and even ſometimes doom them as victims to the craving of their own voracious appetites. It was at firſt remarked by Ariſtotle, and ſince confirmed by Buffon and other celebrated naturaliſts, that all animals with crooked talons were carnivorous; to this general diſtinctive characteriſtic, in the feathered

race, the crooked beak may be added, and all, like quadrupeds of the cat kind, lead a lonely wandering life, and are only united in pairs by that inſtinct which overpowers their rapacious habits of enmity with all other animals. As the male and female are often neceſſary to each other in their purſuits, ſo they ſometimes live together; but, except at certain ſeaſons, they moſt uſually prowl alone; and, like robbers, enjoy in ſolitude the fruits of their plunder.

All birds of prey are remarkable for one ſingularity, for which it is not eaſy to account. All the males are about a third leſs, and much weaker than the females; which is exactly contrary to what occurs among quadrupeds, among whom the males are always the largeſt and boldeſt: The reaſon of this difference cannot proceed from the neceſſity of a larger body in the female for the purpoſes of breeding, and that her volume is thus increaſed by the quantity of her eggs; for in other birds, that breed much faſter, and who lay in a much greater proportion, ſuch as the hen, the duck, or the pheaſant, the male is by much the largeſt of the two. Whatever be the cauſe, certain it is, that the females, as Willoughby expreſſes

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it, are of the greateſt ſize, more beautiful and lovely for ſhape and colours, and ſtronger, more fierce and generous, than the males. Whether it may be neceſſary for the female to be thus ſuperior, from its being incumbent upon her to provide not only for herſelf but her young ones alſo, we cannot determine, but ſuch is the fact.

All rapacious birds, like carnivorous quadrupeds, are lean and meagre. Their fleſh is ſtringy and ill-taſted, ſoon corrupting, and tinctured with the flavour of that animal food upon which they commonly ſubſiſt. Nevertheleſs, Belon aſſerts, that many people admire the fleſh of the vulture and falcon, and dreſs them for eating, when by any accident they are rendered unfit for the chace. He ſays alſo that the oſprey, a ſpecies of the eagle, when young, is excellent food; but he contents himſelf with adviſing us, to breed theſe birds up rather for our pleaſure in the field, than for ſupplying the table.

There are five kinds of land birds of a rapacious nature; namely, thoſe of the eagle, the hawk, the vulture, the horned, and the ſcreech owl kind. The diſtinctive marks of this genus are taken from their claws and beaks: their toes

are alſo ſeparated; their legs are feathered to the heel; they have four toes, three before, and one behind; and their beaks are ſhort, thick and crooked.

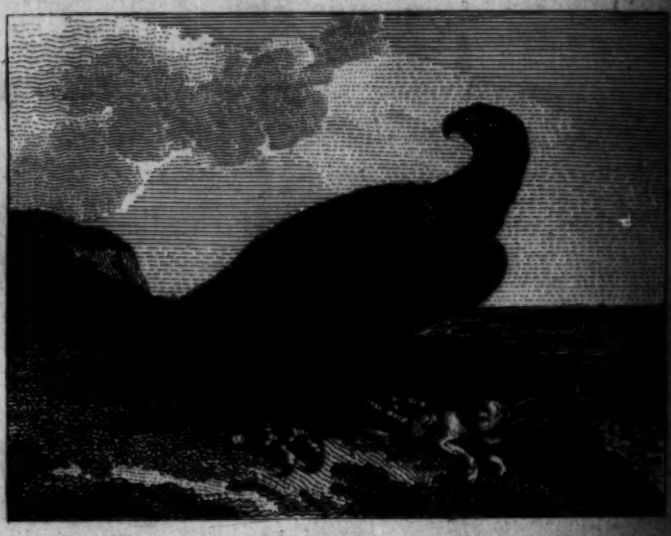
The eagle kind is diſtinguiſhed from the reſt by his beak being ſtraight till towards the end, when it begins to hook downwards.

The vulture kind is diſtinguiſhed by the head and neck being without feathers.

The hawk kind by the beak being hooked from the very root.

The horned owl by the feathers at the baſe of the bill ſtanding forwards; and by ſome feathers on the head, that ſtand out, reſembling horns.

The ſcreech owl, by the feathers at the baſe of the bill ſtanding forward, and being without horns.



Eagle

Vulture

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THE EAGLE, AND ITS AFFINITIES.

THE Golden Eagle ſtands foremoſt among thoſe birds which have received the name of Eagle, both on account of its ſize and courage; ſome of them meaſuring near four feet from the point of the bill to the end of the tail. Its wings, when extended, are more than ſix feet from point to point. The females are ſometimes ſtill larger; (which, indeed, is the caſe with all rapacious birds) and will weigh upwards of eighteen pounds, while that of the male is ſcarcely ever more than twelve. Its bill is three inches long, ſharp, ſtrong, crooked, and of a deep blue. Its eyes are of an hazel colour, and of the preſervation of which Nature has taken peculiar care, for inſtead of one lid, or covering, as is the caſe with moſt other animals, naturaliſts aſſure us that this has no leſs than four. Its ſight and ſenſe of ſmelling are very acute. Its head and neck

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are clothed with narrow ſharp pointed feathers of a deep brown colour, bordered with tawny, but thoſe on the crown of the head, in very old birds, are grey. Its whole body is of a dark brown; and the feathers of the back are finely clouded with a deeper ſhade of the ſame. Its wings, when clothed, reach to the end of its tail, and the quill feathers are of a chocolate colour with the ſhafts white. The tail is of a deep brown, irregularly barred and blotched with an obſcure aſh-colour, and moſt of the feathers are uſually white at the roots. Its legs are yellow, ſhort, and very ſtrong, being three inches in circumference, and feathered to the very feet. The toes are covered with large ſcales, and armed with four moſt formidable crooked talons, more than two inches long, and with which it ſeizes its prey.

Theſe birds are commonly found in mountainous and thinly inhabited countries, where they breed among the loftieſt cliffs. They invariably ſelect thoſe places which are remoteſt from man, upon whoſe poſſeſſions they but ſeldom make their depredations, rather prefering to follow the wild game in the foreſt, and be contented with a ſcanty ſubſiſtence, than

than to riſque their ſafety to ſatisfy their hunger.

The Eagle may be conſidered among birds as the lion ranks among quadrupeds; and in many reſpects they have a ſtrong ſimilitude; they are both poſſeſſed of ſufficient ſtrength to preſerve an empire over their fellows of the foreſt. Equally magnanimous, they diſdain ſmall plunder, and only purſue animals worthy the conqueſt. It is not till after having been long provoked, by the ſcreams of the rook, or the chattering of the magpie, that this generous bird thinks fit to puniſh them with death; the eagle alſo ſcorns to partake of the plunder of another bird, and will not devour any prey but that which he has acquired by his own purſuits. However hungry he may be, he never ſtoops to carrion; and when ſatisfied he never returns to the ſame carcaſs, but leaves it for other animals, more rapacious and leſs delicate than himſelf. Solitary, like the lion, he prowls the deſert alone; it is as extraordinary to ſee two pair of eagles in the ſame part of a mountain, as two lions in the ſame part of a foreſt. They keep ſeparate, to find a more ample ſupply; and conſider the quantity of their game as the beſt proof of their dominion. Nor does the ſimili-

tude

tude of theſe animals ſtop here; they have both ſparkling eyes, and nearly of the ſame colour; their claws are of the ſame form, their breath equally ſtrong, and their cry equally loud and terrifying. Formed both for war, they are enemies of all ſociety; alike fierce, proud, and equally difficult of being tamed. It requires great patience and much art to tame an eagle; and even though taken young, and ſubdued by long aſſiduity, he continues a dangerous domeſtic, and often turns his face againſt his maſter. When brought into the field for the purpoſes of fowling, the falconer is never ſure of his obedience; his innate pride, and love of liberty, ſtill prompt him to regain his native ſolitudes; and the moment the falconer ſees him, when let looſe, firſt ſtoop towards the ground, and then riſe perpendicularly into the clouds, he gives up all his former labour for loſt, quite ſure of never beholding his late priſoner more. Sometimes, however, they are brought to have an attachment for their feeder; they are then highly ſerviceable, and liberally provide for his pleaſures and ſupport. In this caſe, when the falconer lets them go from his hand, they play about, and hover round him till their game appears in view, which they ſee

at

at an immenſe diſtance, and purſue with certain deſtruction.

Of all birds the eagle flies the higheſt, which induced ſome ancients to call him the Bird of Jove, and others the Bird of Heaven; he has alſo the quickeſt eye, but his ſenſe of ſmelling is far inferior to that of the vulture. He never purſues, therefore, but in ſight; and when he has ſeized his prey he ſtoops from his height, as if to examine its weight, always laying it on the ground before he carries it off. Though his wing is very powerful, yet as he has but little ſuppleneſs in the joints of the leg he finds it difficult to riſe when down; but, nevertheleſs, if not inſtantly interrupted, he finds no difficulty in carrying off geeſe and poultry; he will alſo ſeize upon hares, lambs, and kids, and convey them away in his talons; he often deſtroys fawns and calves, and having drank their blood carries part of their fleſh to his retreat. Even infants have been taken away by theſe rapacious creatures, which probably gave riſe to the fable of Ganymede's being ſnatched up by an eagle to heaven.

Sir Robert Sibbald has recorded an inſtance which occurred in the Orkney Iſlands:—A woman, he ſays, having left her child of about

one year old in a field while ſhe went to ſome diſtance, an eagle paſſing by took up the infant, by its clothes, and carried it to her neſt on a neighbouring rock, which being accidentally obſerved by ſome fiſhermen, they inſtantly purſued the eagle, attacked her in her neſt, and brought the child back unhurt.

The following ſtory is related by a gentleman whoſe veracity ſtands unimpeached:—While upon his travels in France he was invited by an officer of diſtinction to paſs a few days at his country-ſeat near Mende; while there the table was every day plentifully ſupplied with wild fowl, but he was not a little ſurpriſed to obſerve that not one was ſerved up which had not undergone ſome mutilation; ſome wanting wings, and others legs or heads; this being ſo invariably the caſe he was at length induced to enquire into the cauſe; when his hoſt replied it was ſolely to be attributed to the voracious appetite of his caterer, and who could not be prevented from firſt taſting what he had prepared. This, inſtead of allaying, rather excited curioſity, which the officer obſerving, he ſatisfied by explaining himſelf in this manner:—Theſe mountainous parts of the kingdom are much frequented by eagles, who

build

build their neſts in the cavities of the neighbouring rocks; theſe are ſought after by the ſhepherds, and who, having diſcovered one, erect a little hut at the foot of the rock, to ſcreen themſelves from the fury of theſe dangerous birds; who are particularly ſo when they have young ones to ſupply with proviſions; in this employ the male is ſedulouſly engaged for the ſpace of three months, and the female continues it until the young bird is capable of quitting the neſt, when that period arrives they force it to ſpring up in the air, where they ſupport him with their wings and talons whenever he is in danger of falling. While the young eagle continues in the neſt the parents ravage all the neighbouring country, and ſeize every kind of poultry, pheaſants, partridges, hares, or kids, that come in their way, and all of which they bear to their young.

The ſhepherds being thus properly ſituated watch the approach of the old ones with their food, who merely ſtay to depoſit their cargo and the moment they have left the neſt the ſhepherds mount the rocks and take away what the eagles have conveyed to their young, leaving the entrails of ſome animal in its ſtead; but as this cannot be done ſo expeditiouſly as

to prevent the young eagles from devouring part of their food, the ſhepherds are under the neceſſity of bringing our ſupply ſomewhat mutilated. This gentleman added, that when the young eagle has ſtrength enough to fly, which being thus deprived of the excellent food its parents provide is much longer than common, the ſhepherds faſten it to the neſt, that the old ones may continue the ſupply, which they do until the diſagreeable taſk of providing for an offſpring that perpetually fatigues them, obliges firſt the male and then the female to forſake it; after which their tenderneſs for another progeny makes them forget the former, whom the ſhepherds leave to ſtarve, unleſs ſometimes actuated by the hopes of future gain they aſſiſt it to eſcape from the neſt.

This ſtory is in ſome meaſure corroborated by Smith, in his Hiſtory of Kerry, who relates, that a poor man in that country got a comfortable ſubſiſtence for his family, during a ſummer of great ſcarcity, out of an eagle's neſt, by robbing the young eagles of their food, which was plentifully ſupplied by the old ones. He protracted their aſſiduity beyond the uſual time, by clipping the wings, and retarding the flight

of

of the young; and very probably alſo by ſo tying them as to increaſe their cries, which is always found to haſte the parent's endeavours to procure them proviſion.

Another circumſtance is related of a peaſant who had reſolved to rob the neſt of an eagle, that had built in a ſmall iſland in the beautiful lake of Killarney. He accordingly ſtripped and ſwam to the iſland, while the old ones were away, and having robbed the neſt of its young, he was preparing to ſwim back, with the eaglets tied in a ſtring; but while he was yet up to his chin in the water the old eagles returned, and miſſing their young quickly fell upon the plunderer, and, in ſpite of all his reſiſtance, diſpatched him with their beaks and talons.

In order to extirpate theſe pernicious birds there is a law in the Orkney Iſlands which entitles any perſon that kills an eagle to a hen out of every houſe in that pariſh in which the plunderer is killed. The eagles uſually build their neſts in the moſt inacceſſible cliffs of the rocks, and in ſuch parts as to have it ſhielded from the weather by ſome jutting crag that hangs over. It is ſometimes, however, wholly expoſed to the winds, both on the ſides as well as above, it being entirely flat, though built with

with great labour. Some naturaliſts aſſure us that the ſame neſt ſerves the eagle during life; and indeed the pains beſtowed in forming it ſeems to argue as much. One of theſe was found in the Peak of Derbyſhire, which Willoughby thus deſcribes:—"It was made of great ſticks, reſting one end on the hedge of a rock, the other on two birch-trees. Upon theſe was a layer of ruſhes, and over them a layer of heath, and upon the heath ruſhes again; upon which lay one young one, and an addled egg; and by them a lamb, an hare, and three heath-pouts. The neſt was about two yards ſquare, and had no hollow in it. The young eagle was of the ſhape of a goſs-hawk, of almoſt the weight of a gooſe, rough-footed, or feathered down to the foot, having a white ring about the tail."

The female eagles of the larger ſpecies have ſeldom more than two eggs, and thoſe of the ſmalleſt ſcarcely ever exceed three; and even of this ſmall number a part is frequently addled; and it is extremely rare to find three eaglets in the ſame neſt. It is ſtrongly aſſerted, that the period of incubation is thirty days, and that as ſoon as the young ones are ſomewhat grown the mother kills the moſt feeble, or the moſt

voracious

voracious. If this is really true it can only be attributed to the parent being incapable to provide for their ſupport, and is therefore content to ſacrifice a part to preſerve the reſt.

The plumage of the eaglets is at firſt white, then inclining to yellow, and when full grown of a light brown. Age, hunger, long captivity, and diſeaſes, make them whiter; and it has been inſiſted on, by ſeveral naturaliſts, that the eagle ſheds its feathers every year, as the ſtag does its horns, and the ſerpent its ſkin. It is ſaid they live above an hundred years, and that they at laſt die, not of old age but from the beaks turning inward upon the under mandible, and thus preventing their taking any food. The Benedictine Monks of the Abbey of St. Bertrand, at St. Omer's, had an eagle living in 1745, which they inſiſted was, by tradition, upwards of three hundred years old. They are equally remarkable, ſays Mr. Pennant, for their longevity, and for their power of ſuſtaining a long abſence from food. One of this ſpecies, which has now been nine years in the poſſeſſion of Mr. Owen Holland, of Conway, lived thirty-two years with the gentleman who made him a preſent of it; but what its age was when the latter received it from Ireland is unknown.

unknown. The ſame bird alſo furniſhes a proof of the truth of the other remark; having once, through the neglect of ſervants, endured hunger for twenty-one days, without any ſuſtenance whatever.

But this is ſtill leſs extraordinary than an inſtance recorded by M. de Buffon, who was aſſured, by a perſon of veracity, that one of them being caught in a fox-trap, exiſted for five entire weeks without any aliment. It ſhewed no appearance of languor till the laſt eight days, and it was killed at length in order to deliver it from its ſufferings. The eagle ſeldom drinks, its principal aliment being raw fleſh, which contains in itſelf a ſufficient quantity of moiſture.

Thoſe who keep eagles in confinement feed them with every kind of fleſh, whether freſh or corrupted; and where there is a deficiency of that, bread, or any other proviſion, will ſuffice, for their rapacious appetite leaves them little choice as to food. It is nevertheleſs very hazardous to approach them if not quite tame; as they are very apt to diſcover the ferocity of their diſpoſitions; and they frequently ſend forth a loud piercing lamentable cry, which renders them ſtill more formidable.

Such

Such are the general characteriſtics and habitudes of the eagle; however, in ſome theſe habitudes differ, as the Sea Eagle and the Oſprey live chiefly upon fiſh, and conſequently build their neſts on the ſea-ſhore, and by the ſides of rivers, on the ground among reeds: theſe lay three or four eggs, rather leſs than thoſe of a hen, of a white elliptic form. They catch their prey, which is chiefly fiſh, by darting down upon them from above. The Italians compare the violent deſcent of theſe birds on their prey, to the fall of lead into water; and call them *aquila piombina*, or the Leaden Eagle.

The Bald Eagle of North Carolina, is not leſs remarkable for habits peculiar to itſelf. Theſe birds breed in that country all the year round. When the eaglets are juſt covered with down, and a ſort of white woolly feathers, the female eagle lays again, and leaves theſe eggs to be hatched by the warmth of the young ones that continue in the neſt; ſo that the flight of one brood makes room for the next, that are but juſt hatched. Theſe birds fly very heavily, ſo that they cannot overtake their prey, like others of the ſame denomination. To remedy this, they often attend the oſprey, which they

purſue, and ſtrip of its prey. This is the more remarkable, as this hawk flies by far the moſt ſwift of the two, but yet the eagle has a kind of preſentiment of anticipating its courſe; and the oſprey, by way of ſecuring itſelf, drops the fiſh it had taken, which the eagle, with wonderful dexterity, is ſaid to catch before it reaches the water. Theſe eagles alſo generally attend upon fowlers in the winter; and when any birds are wounded, they are ſure to be ſeized by the eagle, though they may fly from the fowler. This bird will often alſo ſteal young pigs, and carry them alive to the neſt, which is compoſed of twigs, ſticks and rubbiſh, and is large enough to fill the body of a cart; it is commonly full of bones half eaten, and of putrid fleſh, the ſtench of which is to be felt at a conſiderable diſtance.

Beſides the Golden Eagle, of which we have been treating, there are ſeveral varieties in this ſpecies, the diſtinctive characters of each are as follow:

The *golden eagle (fig. 3.)* is of a tawny iron colour: the head and neck of a reddiſh; the tail a dirty white, marked with croſs bands of tawny iron; and the legs covered down to the feet with tawny iron feathers.

The

The *common eagle* is of a brown, the head and upper part of the neck inclining to red; the tail-feathers white, blackening at the ends; the outer ones, on each ſide, of an aſh colour, and the legs covered with feathers of a reddiſh brown. This bird is common in ſome parts of France and Italy, but much more ſo in Greece; they are often found upon the banks of the Danube, ſeeking their prey, which conſiſts of kids, lambs, geeſe, ſerpents, &c. Mr. Johnſon relates a ſtory of a fox having killed a gooſe near the river Prille in Italy,—one of theſe eagles eſpying it, as he was hovering in the air, immediately deſcending, endeavoured to ſeize upon the gooſe as his prey; but the fox boldly reſiſting, a bloody battle enſued between him and the fox, but the former ſoon became maſter of the field, killed Reynard upon the ſpot, and carried off the prize.

The *bald eagle*, brown over the body and wings, the head, neck, and tail-feathers white; and the feathers of the upper part of the legs brown

The *white eagle*; the whole white; this in all probability is not a particular ſpecies, but a mere variety.

The *rough-footed eagle*; is of a dirty brown, ſpotted under the wings, and on the legs, with white; the feathers of the tail white at the beginning and the point; the leg feathers dirty brown, ſpotted with white.

The *white-tailed eagle* is a dirty brown over the body, the head white, the ſtem of the feathers black, the rump inclining to black, the tail-feathers, the firſt half black, the end half white, legs naked.

The *erne*, a dirty iron colour above, an iron mixed with black below; the head and neck aſh, mixed with cheſnut; the points of the wings blackiſh, the tail-feathers white, and the legs naked.

The *black eagle*, the body and wings nearly a black; the head and upper part of the neck mixed with red; the tail-feathers, the firſt half white, ſpeckled with black; and the other half, blackiſh; the leg-feathers dirty white.

The *ſea eagle*, the colour of this inclines to white, mixed with iron brown, the belly white, with iron coloured ſpots; the covert feathers (which are thoſe ſmall feathers that cover the bottom of the quill feathers) of the tail are whitiſh; the tail-feathers black at the extremity,

mity, and the upper part of the leg-feathers of an iron brown.

The *oſprey* is brown upon the back, and white under the neck and belly; the back of the head white; the outward tail-feathers, on the inner ſide, ſtreaked with white; and its legs are naked.

The *jean le blanc*, is a browniſh grey upon the back; white, ſpotted with tawny brown on its under parts; the tail-feathers on the outſide and at the extremity, brown; on the inſide, white, ſtreaked with brown, and its legs naked. This eagle ſeems peculiar to France, and is not mentioned as having been ſeen in any other country.

The *eagle of Braſil*; blackiſh-brown; aſh colour, mixed in the wings; tail-feathers white; and legs naked.

The *Oroonoko eagle* has a topping upon his head; his back and wings of a blackiſh brown, the under parts white, ſpotted with black; upper part of the neck yellow; tail-feathers brown with white circles; leg-feathers white, and ſpotted with black.

The *crowned African eagle*, with a topping: the tail of an aſh colour, ſtreaked on the upper ſide with black. This eagle is found on the ſouth

ſouth coaſts of Guinea, and chiefly in the province of Acra, and is there called the crowned eagle; at which place there is alſo another ſpecies, nearly black, to which the negroes pay ſuch veneration, that it is a capital crime to kill one, although it deſtroys all their poultry and corn wherever it comes. From conſtantly frequenting muddy places it is always covered with filth, and yet it is eſteemed by the natives as a deity, who daily boil meat for its food and which they lay about ſuch places as they know any one of them haunt.

The *eagle of Pondicherry*; a cheſnut colour; the ſix outward tail-feathers black one half.

Beſides theſe, authors have enumerated the *Chineſe eagle*, which is of a reddiſh brown, with a bar of dark brown acroſs the middle of the wing; the *white-bellied eagle*, the *Japaneſe eagle* which is finely variegated, the *oriental eagle*, the *Javan eagle*, the *fierce eagle* from Aſtracan, the *plaintive eagle* from Terra del Fuego, the *black-cheeked eagle*, the *ſpotted eagle*, the *Statenland eagle*, the *Ruſſian* and *equinoxial eagles*, and the *Mansfeury*.

THE CONDOR.

THE Condor is a native of America, and hitherto naturaliſts have been in doubt whether to refer it to the ſpecies of the eagle, or to that of the vulture. Its great ſtrength, force, and vivacity, is ſuppoſed to give it a claim to rank among the former, while the baldneſs of its head and neck is thought to degrade it among the latter. It is, however, fully ſufficient for our plan to deſcribe its form and cuſtoms, and therefore ſhall leave nomenclators to decide upon its claſs. If ſize, for it is by much the largeſt bird that flies, and ſtrength, combined with rapidity of flight and rapacity, deſerve pre-eminence, no bird can be put in competition with it; for the Condor poſſeſſes, in an higher degree than the eagle, all the qualities that render it formidable, not only to the feathered kind, but to beaſts, and even to man himſelf. Acoſta, Garcilaſſo, and Deſmarchais, aſſert, that

that it is eighteen feet acroſs the wings when they are extended. The beak is ſo ſtrong as to pierce the body of a cow; and it is poſitively aſſerted that two of them are capable of devouring that animal. They do not even abſtain from attacking man himſelf, but fortunately there are but few of the ſpecies. The Indians ſay that they will carry off a deer, or a young calf, in their talons, as eagles would an hare or a rabbit; that their ſight is piercing, and their manners terrific. They ſeldom frequent the foreſts, as they require a large ſpace for the diſplay of their wings, but are found on the ſea ſhore, and the banks of rivers, whither they ſometimes deſcend from the heights of the mountains. According to modern authors they only come down to the ſea ſhore at certain ſeaſons, particularly when their prey happens to fail them upon land; that they then feed upon dead fiſh, and ſuch other nutritious ſubſtances as the ſea throws upon the ſhore; and alſo, that their countenance is not ſo terrible as the old writers have repreſented it, but from their aſpect they appear to be of a milder nature than either the eagle or vulture.

Condamine ſays, he has frequently ſeen them in ſeveral parts of the mountains of Quito, and obſerved

obſerved them hovering over a flock of ſheep; and he thinks they would, at one particular time, have attempted to carry ſome of them off, had they not been ſcared away by the ſhepherds. Labat ſays, that this animal has been deſcribed to him by thoſe who have ſeen it, as having the body as large as that of a ſheep; and that the fleſh is tough, and as diſagreeable as carrion. The Spaniards, reſiding in that country, dread its depredations, there having been many inſtances of its carrying off their children.

Mr. Strong, the maſter of a ſhip, relates, that as he was ſailing along the coaſts of Chili, in the thirty-third degree of ſouth latitude, he obſerved a bird ſitting upon a high cliff near the ſhore, which ſome of the ſhip's company ſhot with a leaden bullet and killed. They were greatly ſurpriſed when they beheld its magnitude, for when the wings were extended they meaſured thirteen feet from one tip to the other. One of the quills was two feet four inches long; and the barrel, or hollow part, was ſix inches and three quarters, and an inch and an half in circumference.

M. Feuillée, who alone has accurately deſcribed it, has given a ſtill more circumſtantial account of this amazing bird. "In the valley

of Illo, in Peru, ſays he, I diſcovered a condor perched on a high rock before me; I approached within gun-ſhot and fired; but, as my piece was only charged with ſwan-ſhot, the lead was not able ſufficiently to pierce the bird's feathers. I perceived, however, by its manner of flying, that it was wounded; and it was with a good deal of difficulty that it flew to another rock, about five hundred yards diſtant on the ſea ſhore. I therefore charged again with ball, and hit the bird under the throat, which made it mine. I accordingly ran up to ſeize it; but even in death it was terrible, and defended itſelf upon its back, with its claws extended againſt me, ſo that I ſcarce knew how to lay hold of it. Had it not been mortally wounded, I ſhould have found it no eaſy matter to take it; but I at laſt dragged it down from the rock, and with the aſſiſtance of one of the ſeamen, I carried it to my tent, to make a coloured drawing.

" The wings of this bird, which I meaſured very exactly, were twelve feet three inches (Engliſh) from tip to tip. The great feathers, that were of a beautiful ſhining black, were two feet four inches long. The thickneſs of the beak was proportionable to the reſt of the body

body; the length about four inches; the point hooked downwards, and white at its extremity; and the other part was of a jet black. A ſhort down, of a brown colour, covered the head, the eyes were black, and ſurrounded with a circle of reddiſh brown. The feathers on the breaſt, neck, and wings, were of a light brown: thoſe on the back were rather darker. Its thighs were covered with brown feathers to the knee. The thigh bone was ten inches long, the leg five inches, the toes were three before and one behind, that behind was an inch and an half, and the claw with which it was armed, was black, and three quarters of an inch. The other claws were in the ſame proportion; and the leg was covered with black ſcales, as alſo the toes; but in theſe the ſcales were larger.

" Theſe birds uſually keep in the mountains where they find their prey, they never deſcend to the ſea-ſhore but in the rainy ſeaſon, for as they are very ſenſible of cold, they go there for greater warmth. Though theſe mountains are ſituated in the torrid zone, the cold is often very ſevere; for a great part of the year they are covered with ſnow, but particularly in winter.

"The little nouriſhment which theſe birds find on the ſea-coaſt, except when a tempeſt drives in ſome great fiſh, obliges the condor to continue there but a ſhort time. They uſually come to the coaſt at the approach of evening, ſtay there all night, and fly back in the morning."

Notwithſtanding the claims ſet up by the American travellers, as to their having firſt diſcovered this bird, it is a matter of much doubt whether its ſpecies is confined to the New World, or has not been deſcribed by naturaliſts of other countries, though under different denominations; the great bird called the rock, deſcribed by Arabian writers, and ſo much exaggerated by fable. The large bird of Tarnaſſar, in the Eaſt Indies, which is larger than the eagle, and the vulture of Senegal, which carries off children, are probably no other than the bird we have been deſcribing. Ruſſia, Lapland, and even Switzerland and Germany, are ſaid to have known this animal. A bird of this kind was ſhot in France, that weighed eighteen pounds, and was ſaid to be eighteen feet acroſs the wings; however, one of the quills was deſcribed as only being larger than that of a ſwan, ſo that probably the breadth of the wings may

have

have been exaggerated, ſince a bird ſo large, agreeably to analogy, would have the quills more than twice as big as thoſe of a ſwan. It is, however, ſcarcely ever ſeen in Europe. In the deſerts of Pachomac, where it is chiefly ſeen, men ſeldom venture to travel. "Thoſe wild regions, ſays a modern writer, are ſufficient of themſelves to inſpire a ſecret horror—broken precipices—prowling panthers—foreſts only vocal with the hiſſing of ſerpents—and mountains rendered ſtill more terrible by the condor, the only bird that ventures to make its reſidence in thoſe deſerted ſituations.

THE VULTURE.

FOR the ſame reaſons that the lion holds the firſt rank among quadrupeds, the eagle is placed at the head of the feathered tribe, not becauſe they are ſtronger or larger than the tiger or vulture, but becauſe they are more bold and generous

generous. The eagle, unleſs preſſed by famine will not ſtoop to carrion; and never devours but what he has earned by his own purſuit. The vulture, on the contrary, is indelicately voracious; and ſeldom attacks living animals, when it can procure dead carcaſſes. The eagle meets and ſingly oppoſes his enemy; but the vulture, (*fig.* 4) if it expects reſiſtance, calls in the aid of its kind, and baſely overpowers its prey by a cowardly combination. Putrefaction and ſtench, inſtead of deterring, only ſerve to allure them; in a word, he is deficient in every reſpectable quality, and is even more deteſtable among birds than the jackall or the hyæna among quadrupeds.

Vultures may be eaſily diſtinguiſhed from all the ſpecies of the eagle by the nakedneſs of their heads and necks, which are without feathers, and only covered with a very ſlight down, or a few ſcattered hairs. Their eyes are more prominent, from not being buried ſo much in the ſocket as thoſe of the eagle. Their claws are ſhorter and leſs hooked. The inſide of their wings is covered with a thick down, and which is different in them from all other birds of prey. When upon the ground, their attitude is not ſo upright as that of the eagle;

eagle; and their flight more difficult and heavy.

Singular as these particulars would have rendered them, they are still more strongly marked by their disposition, which, as we have already observed, is cruel, unclean, and indolent. Their sense of smelling, however, is amazingly great; and Nature, for this purpose, has given them two large apertures or nostrils without, and an extensive olfactory membrane within. Their internal structure is different from that of the eagle, and partakes more of the formation of such birds as live upon grain. They have both a crop and a stomach; which may be regarded as a kind of gizzard, from the extreme thickness of the muscles of which it is composed; in short, they seem adapted inwardly, not only for being carnivorous, but to eat corn, or whatsoever of that kind comes in their way; and which they pretty generally put in practice.

The vulture is common in many parts of Europe, and too well known on the western continent, but is totally unknown in England. In Egypt, Arabia, and many other kingdoms of Africa and Asia, vultures are found in great abundance. The inside down of their wing

wing is converted into a very warm and comfortable kind of fur, and is commonly ſold in the Aſiatic markets.

Obnoxious as this bird muſt be from his voracious characteriſtics, yet he ſeems to be of ſingular ſervice. There are great flocks of them in the neighbourhood of Grand Cairo, not one of which is any perſon permitted to deſtroy, becauſe they devour all the carrion and filth of that great city, and which might otherwiſe tend to corrupt and putrify the air. They are there commonly ſeen in company with the wild dogs of the country, and tearing a carcaſs very deliberately together. This peculiar aſſociation produces no quarrels; the birds and quadrupeds feed amicably upon one piece of carrion, and nothing but harmony ſubſiſts between them; and this appears the more aſtoniſhing, as both are extremely rapacious, and both lean and bony to a very great degree; probably from not having any great plenty even of the wretched food on which they ſubſiſt.

In America, they lead a life ſomewhat ſimilar. Wherever the hunters, who there only purſue beaſts for the ſkins, are found to go, theſe birds are ſeen to purſue them. They keep

keep hovering at a little diſtance; and when they ſee the beaſt flayed and abandoned, they call to each other, pour down upon the carcaſs, and pick its bones as bare and clean as if they had been ſcraped by a knife.

According to Herodotus, this attendance, however, is totally unneceſſary, ſince he ſays they can ſmell a dead carcaſs at the diſtance of fifteen thouſand paces, and to which he principally attributes the circumſtance of a field of battle being conſtantly covered the day after an engagement with flocks of theſe birds, feeding on the ſlaughtered carcaſſes of both men and horſes.

Kolbe has related ſome very curious circumſtances of this bird; "I have often, (ſays "this author,) while reſiding at the Cape of "Good Hope, been a ſpectator of the manner "in which they have anatomized a dead body: "I ſay anatomized, for no artiſt in the world "could have done it more cleanly. They have "a wonderful method of ſeparating the fleſh "from the bones, and yet leaving the ſkin "quite entire. Upon coming near the carcaſs, "no one would ſuppoſe it thus deprived of "its internal ſubſtance, till he began to examine "it more cloſely; he then finds it, literally

" ſpeaking, nothing but ſkin and bone. Their " manner of performing the operation, is this: " they firſt make an opening in the belly of the " animal, from whence they pluck out and " greedily devour the entrails: then entering " into the hollow which they have made, they " ſeparate the fleſh from the bones, without " ever touching the ſkin. It often happens " that an ox returning home alone to its ſtall " from the plough, lies down by the way; it is " then, if the vultures perceive it, that they " fall with fury down, and inevitably devour " the unfortunate animal. They ſometimes " attempt them grazing in the fields; and then, " to the number of a hundred, or more, make " their attack all together."

Some authors have been inclined to give credit to the common opinion, that the vulture never deſtroys, or feeds upon any thing that has life; but no concluſion can poſſibly be more unfounded; for they are mortal enemies to almoſt all kind of poultry, hares, and young kids.

" They are attracted by carrion," ſays Cateſby, " from a very great diſtance. It is " pleaſant to behold them, when they are thus " eating, and diſputing for their prey. An

eagle

« eagle generally preſides at theſe entertain-
« ments, and makes them all keep their diſtance
« till he has done. They then fall too with
« an excellent appetite: and their ſenſe of
« ſmelling is ſo exquiſite, that the inſtant a
« carcaſs drops, we may ſee the vultures float-
« ing in the air from all quarters, and come
« ſouſing on their prey." When they can come at lambs, they ſhew no mercy; and ſerpents are their ordinary food. Albertus ſays they wound their prey with only two of their talons, and carry it off with their others. It is a common practice with theſe birds to perch, ſeveral together, on old pine and cypreſs-trees; where they continue in a morning, for ſeveral hours, with their wings unfolded: they are not by any means apprehenſive of danger, but will ſuffer themſelves to be approached very near, particularly when they are eating, without diſcovering the ſmalleſt ſigns of fear.

The filth, idleneſs, and voraciouſneſs of theſe birds, almoſt exceed credibility. In the Braſils, where they are found in great abundance, when they light upon a carcaſs, which they have liberty to tear at their eaſe, they ſo gorge themſelves, that they are unable to fly, and if purſued, can only attempt their eſcape by hopping along; but when hard preſſed, they

get rid of their burthen, by vomiting up what they have eaten, and then fly off with as much ſpeed as poſſible, they being at all times, however, ſlow of flight.

There is a ſpecies of hoſtilities always exiſting between almoſt all kinds of rapacious animals; but of all creatures, the two moſt at enmity, are the vulture of Braſil and the crocodile. The female crocodile, which in the rivers of that part of the world, has been known to grow to the length of twenty-ſeven feet, lays its eggs ſometimes to the number of two hundred, in the ſands, on the ſide of the rivers, where they are hatched by the heat of the climate. Leaving them for this purpoſe, ſhe takes every precaution to hide from all other animals the place where ſhe depoſits her burthen; but the vultures, or galinaſſes, as the Spaniards call them, conceal themſelves in the branches of ſome neighbouring foreſt, where they ſit in perfect ſilence, patiently watching the crocodile's operations, with the pleaſing hopes of the expected plunder. They remain in this manner until the crocodile has laid the whole number of her eggs (all of which ſhe carefully covers under the ſand) and has retired to a conſiderable diſtance from them; when, all together,

together, encouraging each other with their cries, they pour down upon the place, hook up the ſand in a moment, lay the eggs bare, and devour the whole brood without remorſe. The fleſh of theſe animals is almoſt beyond conception bad, yet there have been inſtances of men, when preſſed with hunger, endeavouring to eat it. Yet nothing can be more lean, ſtringy, nauſeous, and unſavoury. It is in vain that, when killed, the rump has been cut off; in vain the body has been waſhed, and ſpices uſed to overpower its prevailing odour; it ſtill ſmells and taſtes of the carrion by which it was nouriſhed, and ſends forth a ſtench that is inſupportable. Theſe birds, as far as we have been able to diſcover, uſually lay two eggs at a time, and produce but once a year. They make their neſts in inacceſſible cliffs, and in places ſo remote that they are ſeldom met with. Thoſe in our part of the world, chiefly reſide in the places where they breed, and ſeldom come down into the plains, except when the ſnow and ice, in their native retreats, has baniſhed all living animals but themſelves: they then come from their heights, and brave the perils they muſt encounter in more cultivated regions. As carrion is not found, at

thoſe

thoſe ſeaſons, in ſufficient quantity, or ſufficiently remote from man to ſuſtain them, they prey upon rabbits, hares, ſerpents, and whatever ſmall game they can overtake or overpower.

Such are the principal characteriſtics of the Vulture; and the moſt remarkable tribes of this ſpecies are as follow: at the head of them we muſt place what is called the *King of the Vultures*, which, from its extraordinary figure, deſerves a particular deſcription. This bird is a native of America, and not of the Eaſt-Indies, as it is frequently pretended; it is larger than a turkey-cock, and particularly remarkable for the formation of the ſkin of the head and neck, which is bare. This ſkin ariſes from the baſe of the bill, and is of an orange colour; from whence it ſtretches on each ſide to the head, then extends, like an indented comb, and falls on either ſide, according to the motion of the head. The eyes are ſurrounded by a ſkin of a ſcarlet colour, and the iris has the colour and luſtre of pearl. The head and neck are without feathers, covered with a fleſh-coloured ſkin on the upper part, a fine ſcarlet behind the head, and a duſky brown before: farther down behind the head ariſes a little

little tuft of black down, from whence iſſues and extends beneath the throat, on each ſide, a wrinkled ſkin, of a browniſh colour, mixed with blue, and reddiſh behind. At the bottom of the neck, juſt above the ſhoulders, there is a ruff, or collar, formed with ſoft, long feathers, of a deep aſh colour, which ſurround the neck, and cover the breaſt before; into this collar the bird ſometimes withdraws its whole neck, and ſometimes a part of its head; ſo that it looks as if it had withdrawn the neck into the body. The body is of a reddiſh brown, the belly white, with a tinge of yellow, and the ſtem of the quills black. Thoſe marks are ſufficient to diſtinguiſh this race from all the others of the vulture kind, although neither its habits nor inſtincts vary from the reſt of the tribe, being, like them, a ſlow cowardly bird, living chiefly upon rats, lizards, ſerpents, and all ſorts of carrion that comes in its way.

The *golden vulture*, has many characteriſtics, like the golden eagle, but is larger in every proportion. From the end of the beak, to that of the tail, it is four feet and an half; and to the claws end, forty-five inches. The length of the upper mandible is almoſt ſeven inches; and the tail twenty-ſeven in length.

The

The lower part of the neck, breaſt, and belly, are of a red colour, black on the back, and the wings and tail of a yellowiſh brown.

The *Alpine vulture*, Linnæus deſcribes as the male being wholly white; the quills black, with grey edges, except the two outer ones, which are entirely black; and the female as quite brown, except the four outer quills, which are black, and which in ſize exceed the common eagle.

The *fulvous vulture*, or *griffon*, is about three feet ſix inches in length, and eight feet in the wings. The head, neck, and ruff, are white; the back reddiſh grey; the quills and tail black; the breaſt bare of feathers, and covered with downy hair.

The *cinereous vulture* is rather larger than the common eagle. The head and neck are covered with brown down, and beneath the throat there is a kind of beard. The body is brown, and the legs are feathered down to the toes. The laſt three inhabit parts of Europe.

The *bare vulture* is ſmaller than all the preceding. It is of a ſhining reddiſh black, the breaſt inclining to yellow. It is found in many parts of Europe and Aſia. When it is ſitting

or

or ſtanding, it erects a creſt on its head, which does not appear when it flies.

The *aſh-coloured*, or *ſmall vulture*, is the ſize of a large cock. It is generally of a ſooty grey, ſpotted with cheſnut, and the head and neck white.

The *carrion vulture* is a ſpecies found in vaſt flocks in all parts of America, where they are of great utility in deſtroying ſnakes and vermin, and devouring the dead and putrid carcaſſes. This bird is full as large as a turkey. Its head and neck are bare of feathers, and of a reddiſh colour, and the ſides of the head warted like thoſe of a turkey. The plumage of the wings and back is a browniſh black, with a purple and greeniſh gloſs in different characters.

The *Egyptian vulture* is much of the ſame nature, but is not above the ſize of a kite.

The *ſecretary*, is common in the ſouthern parts of Africa. It is full three feet in height; the bill black, and like that of an eagle; on the upper eye-lid there are briſtles, like eye-laſhes, and from the back of the head ſprings a beautiful pendant creſt. The body in general is aſh-

coloured, and the tips of the wings are black.

Beſides theſe, naturaliſts have mentioned the *creſted vulture*, the *Arabian vulture*, the *bearded vulture*, the *black vulture*, the *Angola*, and the *Bengal vultures*, the *tawny vulture*, and many others, but which there is great reaſon to conclude, are mere varieties of the above deſcribed.

THE FALCON AND ITS AFFINITIES.

ALTHOUGH the birds of which we are now about to treat are conſiderably ſmaller than any of the preceding, yet they are no leſs important to man from contributing to his pleaſures. Heretofore they muſt have been particularly ſo, for notwithſtanding the ſport of hawking is little practiced in the preſent day, and in a great meaſure gone into diſuſe in this kingdom, by the impediments thrown in its way by the

FIG. 6.

Honey Buzzard.

FIG. 5.

Falcon.

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the multiplicity of modern incloſures, yet it was the principal amuſement of our anceſtors. Formerly a perſon of rank ſcarce ſtirred out without his hawk on his hand, and which is marked in old paintings as the criterion of nobility. Harold, before he was King of England, went on a moſt important embaſſy into Normandy, and which circumſtance is meant to be recorded by an old painting in which he is drawn, as embarking with a bird on his fiſt and a dog under his arm. "In thoſe days, ſays Goldſmith, it was thought ſufficient for noblemen's ſons to wind the horn, and to carry their hawk fair." But, indeed, this diverſion has been in ſuch high eſteem among the great all over Europe, that Frederic, one of the Emperors of Germany thought it not beneath him to write a treatiſe upon hawking. This ſport, however, was attended with very great expence, and in ſome inſtances productive of honours.

Among the old Welch princes, the king's falconer was the fourth officer in the ſtate; but, notwithſtanding all his dignity, he was forbid, to take more than three draughts of beer from his horn, leſt he ſhould get drunk and neglect his duty. In the reign of James the Firſt, Sir Thomas Monſon is ſaid to have given a thou-

ſand pounds for a caſt of hawks; and ſuch was their value in general, that it was made felony in the reign of Edward the Third to ſteal a hawk. To take its eggs, even in a perſon's own ground, was puniſhable with impriſonment for a year and a day, together with a fine at the king's pleaſure. In the reign of Elizabeth, the impriſonment was reduced to three months; but the offender was to lie in priſon till he got ſecurity for his good behaviour for ſeven years farther. The art of ſhooting being in thoſe days but little known and leſs practiſed, the hawk was doubtleſs valuable, not only for its affording diverſion, but for procuring thoſe delicacies for the table, which without its aid could ſcarcely ever be obtained.

Many of the falcons which were formerly uſed for this purpoſe, are at this time known only by name, their ſpecies being ſo ill deſcribed, that one may eaſily be miſtaken for another. Of thoſe in uſe at preſent, both in this and other countries, are the gyr-falcon, the falcon, the lanner, the ſacre, the hobby, the keſtril, and the merlin. Theſe are called the *long-winged hawks*, to diſtinguiſh them from the goſs-hawk, the ſparrow-hawk, the kite, and the buzzard, which

which have ſhorter wings, and are either too ſlow, too cowardly, too indolent, or too obſtinate, to be trained to the ſports of the field. The wings of thoſe in the firſt claſs reach nearly as low as the tail; the firſt quill of the wing is nearly as long as the ſecond, (which is always the largeſt,) and terminates in a point which begins to diminiſh from about an inch of its extremity. In the latter race, the tail is longer than the wings, the firſt feather of the wing is rounded at the extremity, and the fourth feather of the wing longer than any of the reſt.

The firſt race, which have been taken into the ſervice of man, are alſo endowed with ſuperior natural powers. From the length of their wings, they are ſwifter to purſue their game; from a confidence in this ſwiftneſs, they are bolder to attack it; and, from an innate generoſity, they have an attachment to their feeder, and conſequently a docility which the baſer birds are ſtrangers to.

The *gyr-falcon* ſtands at the head of this genus. He exceeds all other falcons in ſize, and nearly approaches the magnitude of the eagle. The top of the head is flat and of an aſh colour. The beak is blue, ſtrong, ſhort, and

and crooked. The feathers of the back and wings are marked with black ſpots upon a dark ground, in the ſhape of an heart. He is a courageous and fierce bird, nor fears even the eagle himſelf; but chiefly flies at the ſtork, the heron, and the crane. He is moſtly found in the colder regions of the North, but loſes neither his ſtrength nor his courage when brought into the milder climates.

The *falcon*, properly ſo called, is the ſecond in magnitude and fame. There are ſeveral varieties in this ſpecies; but there ſeem to be only two that claim diſtinction; the falcon gentil and the peregrine falcon; both of which are about the ſize of a raven; and they differ but ſlightly either in ſhape or colour, being, like moſt of this race of birds, of a dark brown, intermixed with black aſh-coloured feathers; the breaſt being generally lighter than the back. The falcon gentil moults in March, and often ſooner, but the peregrine falcon does not moult till the middle of Auguſt. The principal difference between them conſiſts in the latter being the ſtrongeſt in the ſhoulders, having larger eyes, and yet more ſunk in the head; his beak is ſtronger, his legs longer, and his toes more diſtinctly divided.

The

The *lanner* ſtands next in ſize, but he is little known in Europe; he is followed by the *ſacre*, the legs of which are of a bluiſh colour, and by which he is diſtinguiſhed. To them ſucceeds the *hobby*, commonly uſed for ſmaller game, for daring larks and ſtooping at quails. The *keſtril* was alſo trained for the ſame purpoſes; as was laſtly the *merlin*; which though the ſmalleſt of all the hawk or falcon kind, and not much larger than a fieldfare, yet, for vigour and ſpirit, gives place to none: he ſtrikes his prey with ſo much violence, as often to kill a quail or partridge with a ſingle ſtroke: this alſo differs ſomewhat in colour from the reſt, the feathers on the back being ſhaded with a light blue, his wings ſpotted with a ruſty colour; his breaſt a dirty white, with dark ſpots, his legs yellow, and black talons. While hawking was in general uſe, thoſe fond of the ſport would endeavour to train ſome of the other tribes, but that was only when they could not procure any of the above, which were always conſidered as a ſuperior race. It is ſaid that their courage in general was ſuch, that no bird, not very much above their own ſize, could terrify them; their ſwiftneſs ſo great, that ſcarce any bird could eſcape them;

and

and their docility ſo remarkable, that they obeyed not only the commands, but the ſigns of their maſter. They remained quietly perched upon his hand till their game was fluſhed, or elſe kept hovering round his head, without ever leaving him but when he gave permiſſion. The common falcon is a bird of ſuch ſpirit, that he keeps all other birds in awe and ſubjection. When he is ſeen flying wild, the birds of every kind, that apparently diſregard the kite, or the ſparrow-hawk, fly with ſcreams at his moſt diſtant appearance. The young falcons, even though their ſpirit be depreſſed by captivity, will, when firſt brought out into the field, venture to fly at barnacles and wild geeſe, till, being ſoundly bruſhed and beaten by thoſe ſtrong birds, they learn their error, and deſiſt from meddling with ſuch unwieldy game.

To train up the hawk to this kind of obedience, ſo as to hunt for his maſter, and bring him the game he ſhall kill, requires no ſmall degree of ſkill and aſſiduity. Numberleſs treatiſes have been written on this ſubject, which are now, with the ſport itſelf, almoſt utterly forgotten: indeed, they ſeem almoſt unintelligible; for the falconers had a language peculiar

liar to themſelves, and took a kind of profeſſional pride in uſing no other. A modern reader would be little edified by one of the inſtructions, for inſtance, which we find in Willoughby, when he bids us *draw our falcon out of the mew twenty days before we enſeam her. If ſhe truſs and carry, the remedy is, coſſe her talons, her powſe, and petty ſingle.*

But as it certainly makes a part of natural hiſtory to ſhew how much the nature of birds can be wrought upon by harſh or kind treatment, we ſhall juſt give a ſhort account of the manner of training an hawk, diveſted of thoſe cant words with which profeſſional men too often envelope their deſcriptions.

Much pains was taken in the firſt inſtance to procure a ſupply from the neſt, as thoſe were by far more eaſily brought to obedience than ſuch as had for ſome time enjoyed their liberty; although by perſeverance the latter might be rendered equally tractable. The firſt ſtep taken was to clap ſtraps upon his legs, which were called *jeſſes*, to which were faſtened a ring with the owner's name, that in caſe he ſhould be loſt, the finder ſhould know where to bring him back. To theſe alſo were added little bells, which ſerved to mark the place where he was,

if loſt in the chace. The falconer then proceeded to his taſk, and as ſettling on the hand s of material conſequence, this was attended o with care, and for which purpoſe he was conſtantly carried on the fiſt, and obliged to keep without ſleeping, ſometimes for three days and nights together, and without being ſupplied with any food. If he was ſtubborn and attempted to bite, his head was plunged into water, and thus, by hunger, watching, and fatigue, he was conſtrained to ſubmit to having his head covered by a hood, or cowl, which covers his eyes, without reſiſtance; and it rarely happened but at the end of this time his neceſſities, and the privation of light, had made him loſe all idea of liberty, and ſubdued his natural wildneſs. He was conſidered as being tamed when he permitted his head to be covered without reſiſtance, and when uncovered he ſeized the meat before him contentedly. The repetition of theſe leſſons by degrees enſured ſucceſs. His wants being the chief dependence upon which any reliance could be placed, endeavours were made to increaſe his appetite by giving him little balls of flannel, which he greedily ſwallowed. Having thus excited his appetite, they inſtantly ſupplied him with

with the means of ſatisfying it; and thus gratitude attached the bird to the man who but juſt before had been his tormentor.

When the bird ſhewed ſigns of docility he was carried out upon ſome green, with his head uncovered, and by being flattered with food at different times, he was taught to jump on the fiſt, and to continue there. When confirmed in this habit, it was then thought time to make him acquainted with the lure. This lure was a thing ſtuffed like the bird the falcon was deſigned to purſue, ſuch as an heron, a pigeon, or a quail, and on this lure they always took care to give him his food; not merely ſuch as he would eat, but that of which he was moſt fond: it was the practice of ſome falconers, when the bird had flown upon the lure and taſted the food, to take it away, but this was found to check his courage and aſſiduity, and the moſt advantageous method was to let him feaſt as long as he choſe, by way of recompenſing him for his docility. The uſe of this lure is to draw him back when he has flown into the air, and which it is always requiſite to aſſiſt by the voice and certain ſigns of his maſter, with which he muſt have been rendered familiar; and to do this it is neceſſary to ſtudy

the character of the bird; to ſpeak frequently to him if he be inattentive to the voice; to ſtint in his food ſuch as do not come kindly or readily to the lure; to keep him waking if he be not ſufficiently obedient, and to cover him frequently with an hood if he fears darkneſs. When the familiarity and the docility of the bird were ſufficiently confirmed they carried him into the open fields, but ſtill kept faſt by a ſtring, about twenty yards long, until by practice he would fly to the lure from its greateſt diſtance: this being taught him by degrees required ſeveral days, but when accompliſhed, he was then ſhewn the game itſelf alive, but diſabled or tame, which he was deſigned to purſue. After having ſeized this ſeveral times with his ſtring, and began to diſcover a fondneſs for the ſport, he was relieved from his ſhackles, and truſted to purſue the uncaught game that floated in the air. In almoſt the firſt inſtance they would fly at it with avidity, and having ſeized, would bring it to their maſter, either in obedience to his voice, or attractions of the lure.

By this method of inſtruction an hawk may be taught to fly at any game whatſoever; but falconers chiefly confined their purſuit to ſuch animals

animals as yielded them profit by the capture, or pleaſure in the purſuit. The hare, the partridge, and the quail, repay the trouble of taking them; but the moſt delightful ſport is the falcon's purſuit of the heron, the kite, or the woodlark. Inſtead of flying directly forward, as ſome other birds do, thoſe, when they ſee themſelves threatened by the approach of the hawk, immediately take to the ſkies. They fly almoſt perpendicularly upward, while their ardent purſuer keeps pace with their flight, and tries to riſe above them. Thus both diminiſh by degrees from the gazing ſpectator below, till they are quite loſt in the clouds; but they are ſoon ſeen deſcending, ſtruggling together, and uſing every effort on both ſides; the one of rapacious inſult, the other of deſperate defence. The unequal combat is ſoon at an end; the falcon comes off victorious, and the other, killed or diſabled, becomes a prey to the bird or the ſportſman.

Other birds are not ſo much purſued, becauſe as they generally fly ſtraight forward the ſportſman loſes ſight of the chace, and what is ſtill worſe, runs a chance of loſing his falcon alſo. The purſuit of the lark, by a couple of merlins, is conſidered, by him who regards the ſagacity

ſagacity of the chace, as one of the moſt delightful ſpectacles this exerciſe can afford. One of the merlins ſoars with all its might to get the aſcendancy of the lark, while the other remains below waiting the ſucceſs of its companion's efforts; thus while the one ſtoops to ſtrike its prey, the other ſeizes it at its coming down.

A ſomewhat ſimilar practice is related by an ancient hiſtorian to take place by the larger ſpecies at Chili, where he ſays the Indians make uſe of them to catch a bird which they call *quulteu*, and which are pretty numerous among their marſhy grounds. The ſportſman, on ſeeing his game, throws up one of his falcons, who, as though indifferent of the object of purſuit, endeavours not only to get as high as he can but alſo to get the wind of him; to this, however, the *quulteu* is not inattentive, but inſtantly contends with his enemy for this pre-eminence of ſituation, ſo that they aſcend nearly out of ſight: but the falcon having the better wing is ſure to gain the advantage, and this he no ſooner perceives than he inſtantly darts with incredible ſwiftneſs upon his prey. Againſt this firſt attack the *quulteu* defends himſelf either by avoiding the blow,

blow, or by oppoſing ſome armed points he has on his wings, and by which the unwary hawk is often wounded in the breaſt. When the engagement continues for any length of time the ſportſman lets go his other hawk to aſſiſt the firſt, and who, being freſh, ſoon joins his companion, and both fall upon the poor *quulteu*, but not at the ſame time, leſt they ſhould be in one another's way, but firſt one gives him a blow, and then the other; ſo that although the bird makes a good defence ſtill he is obliged to yield to this ſuperior force, but which, however, he does not aſſent to before making for the water, which is the laſt retreat to defend his life. Here lying upon his back, with the ſharp points of his wings turned up, he expects his enemies; the falcon, deſpiſing the danger, comes down with all his force, and ſeizing him with one foot ſoon puts a period to his exiſtence, but not without ſometimes receiving very dangerous wounds.

In thoſe countries it is alſo related that they are taught to fly at the moſt ferocious animals, and for this enterpriſe they are inſtructed by the ſkin of an animal being ſtuffed, and part of the head being filled with the kind of food the hawk is the moſt fond of, particularly the cavities

cavities of the eyes, which being ſhewn him he is allowed nothing to eat but what he can pick therefrom. The figure thus prepared is moved while the bird is feeding; at firſt very ſlowly, increaſing, however, by degrees until it is dragged backwards and forwards with great rapidity: by this means the bird is learned to faſten himſelf on the ſcull, ſince he ſoon becomes conſcious that he ſhall loſe his meal if he once quits his hold. When he has been ſome time exerciſed in this manner, the ſtuffed ſkin is placed on a kind of car, and although the horſe is driven at full ſpeed the bird will follow and fix upon the head, notwithſtanding the ſwiftneſs of the motion. Thus tutored, if thrown up by his maſter he never fails to faſten on the head of the firſt of the ſpecies of animals with which he has been trained comes in view, and having been in the habit of procuring food from the cavities of the eyes he immediately begins to ſcoop them out, which throwing the creature into agonies obliges him to ſtop, and thus give the hunters time to approach and kill him without danger.

Such are the natural and acquired habits of theſe birds, which of all others have the greateſt ſtrength and courage relative to their ſize.

The

FIG. 7.
The Kite.

FIG. 9.
Barn Owl.

FIG. 8.
Horned Owl.

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The kite, or the goſs-hawk, approach their prey ſideways, but theſe dart perpendicularly, in their wild ſtate, upon their game, and devour it on the ſpot; or carry it off, if not too large for their power of flying. They ſometimes deſcend perpendicularly from the clouds, from an amazing height, and dart on their prey with inevitable ſwiftneſs and deſtruction. The inferior race of rapacious birds make up by cunning and aſſiduity what theſe claim by force and celerity. Being leſs courageous, they are more patient; and having leſs ſwiftneſs they are better ſkilled at taking their prey by ſurpriſe.

Of this order the *kite (fig. 7.)* ſeems to ſtand foremoſt for aſſiduity and cunning; he has a ſtrong, black, crooked bill, his eyes are large, and placed prominent in his head, which as well as the upper part of his breaſt is of an aſh-colour, a little ſhaded by the ſtem of the feathers haveing dark lines, and which are quite black upon the neck; his back is of a duſky brown, the middle of the feathers inclining to black as they approach the tail. The leſſer rows of the wing-feathers are of a party-colour black, red and white; the outſide ones being principally red, ſpotted with black; his tail is

broad and forked at the end, is of a dark red, with black ſtrokes towards the extremity; the tips of all his feathers are of a light ſhade; his legs and feet are yellow, and his talons black. The kite may be diſtinguiſhed from all the reſt of his tribe by his forky tail and his ſlow floating motion, which makes him appear to reſt upon the boſom of the air, and not to make the ſmalleſt effort in flying. He is almoſt for ever on the wing, and which indeed is ſomewhat neceſſary, as he lives only upon accidental carnage, almoſt every bird in the air being able to make good its retreat againſt him. He is, therefore, conſtantly prowling about, and when he finds a ſmall bird wounded, or a young chicken ſtrayed too far from its mother, he takes advantage of the hour of calamity, and, like a famiſhed glutton, is ſure to ſhew no mercy. His hunger, indeed, often urges him to acts of ſeeming deſperation; he will hover over a clutch of chickens for a conſiderable time, and then, on a ſudden, dart upon one of them and carry it off, notwithſtanding the cries of the hen, and even though boys ſtand hooting and caſting ſtones to ſcare it from its plunder.

The

The kite is the beſt known of all this ſpecies, although the *Buzzard* among us is the moſt plenty. This bird is larger than a pheaſant; he has a large head, and flat crown, with a ſhort hooking bill, of a bluiſh colour; the upper part of his body is of a darkiſh dun; ſome of them have white ſpots in the upper feathers of the wings, which, when ſpread, have the appearance of a white line, ſomewhat like what is ſeen upon the back and ſhoulders; the extreme edges of the feathers are of a dirty yellow, the belly of a yellowiſh white, with ruſty ſpots on the breaſt, he has a ſort of briſtles, or hair, between the eyes and noſtrils, and a large down upon the middle of the back, which is covered with the ſcapular feathers. The thighs are large and fleſhy, and feathered below the knees; the legs and feet are yellow, and covered with ſcales. He is a ſluggiſh inactive bird, and often remains perched whole days together upon the ſame bough. He feeds upon ſmall birds, mice, moles, and rabbits, the latter of whom he watches with peculiar ſubtlety. He lives in ſummer by robbing the neſts of other birds, and ſucking their eggs, and more reſembles the owl kind in his countenance than any other rapacious bird of day.

They commonly lay from two to four white eggs, with ſmall reddiſh ſpots. His figure implies the ſtupidity of his diſpoſition; and ſo little is he capable of inſtruction from man, that it is common to a proverb to call one who cannot be taught, or continues obſtinately ignorant, *a buzzard.*

The *honey buzzard* is about the ſize of a common buzzard, and nearly reſembles it in the ſhape of the body: the head of this is a ſort of aſh colour; the bottom part of the feathers on the back are whitiſh, and the upper ones of a mouſe dun: the tips of the flag-feathers, and thoſe in the ſecond or third rows of the wings are white; thoſe on the breaſt, belly, and tail, are white, intermixed with black ſpots; its legs and feet are yellow, and feathered below the knee. This bird will run very ſwift, and for a conſiderable way, before it takes wing, and in its motion is very like a common hen; it builds a neſt of ſmall twigs, which it covers with wool, or ſoft down, and upon which it lays its eggs and hatches its young.

The *moor buzzard* is conſiderably leſs than the other two; its whole body is a kind of ruſty brown colour, except the top of the head, which inclines to a dun; on the middle joint

joint of both the wings there is a ſpot of the ſame colour as that upon the head, and the feathers on the riſe of the tail differ therefrom only by being a few ſhades darker; the tail itſelf is of a yellowiſh brown, and about eight or nine inches long; the legs are near five inches long, and very ſlender, comparatively with other birds of its kind; both legs and feet are yellow, the talons black, and it has feathers growing below the knee. The ſkin of the breaſt of this bird, on account of the ſoftneſs of its feathers, has often been recommended as a cover for the pit of the ſtomach, in order to help indigeſtion.

The *goſs-hawk* is well known in moſt parts of England; its beak inclines to blue; its head, neck, back, and upper part of the wings, are of a darkiſh brown; the breaſt and belly of a yellowiſh white, with pretty thick tranſverſe black lines, and a black line in the middle down the ſhaft; the thighs are covered with reddiſh feathers; the legs and feet are yellow, and the talons black; the tail is both long and broad, of a dun colour, with ſeveral mottled croſs bars at ſome diſtance from each other; the wings, when cloſed, fall a good deal

deal ſhort of the end of the tail, by which, and the largeneſs of its ſize, it is eaſily diſtinguiſhed from other birds of this kind.

The *ſparrow-hawk* is rather larger than a common-ſized pigeon; it has a ſhort-hooked bill, rather bluiſh, but black towards the tip; though its eyes are of the common ſize, yet it is wonderfully ſharp-ſighted; the top of its head is of a dark brown; ſome few of them, however, have white feathers over the eyes on the back part of the head; the wings, and upper parts of the body, are brown ſpotted with a yellowiſh dun; the lower parts of the body in ſome are whitiſh, and in others of a ruſſet colour. The tail is pretty long, and the wings when cloſed do not reach beyond its middle; it has ſtrong thighs, ſlender yellow legs, with long toes, and black talons. The eggs at the broad end are ſpotted with a ſort of red circle in ſpecks of a pretty deep colour. For its ſize this is a very bold, courageous bird, and will often ſeize upon others larger than itſelf; and notwithſtanding the general concluſion againſt the want of capacity and docility in thoſe we have laſt enumerated, this is ſaid to be ſometimes trained to be uſeful in the field.

Of

Of the falcon, kite, and buzzard kind, ſome nomenclators have arranged upwards of ſeventy ſpecies, many of them, as M. de Buffon judiciouſly obſerves, without any difference; we do not, however, mean to aſſert, that there are not more than we have deſcribed, but then their variations are ſo trivial, that we may ſafely preſume a general characteriſtic may be drawn of both the bold and inferior ſpecies, from what we have ſaid of the falcon and kite, except that in many of the warmer climates they have a brighter plumage, and ſome have brilliant creſts upon their heads.

THE BUTCHER-BIRD.

THIS bird is alſo of a rapacious diſpoſition, and is the ſmalleſt of the carnivorous claſs. There are ſaid to be a great number of varieties of this ſpecies, but we ſhall confine ourſelves to the account of two which are commonly known by the names of the *great* and the *ſmall butcher birds*. The great one in ſome parts of England is called the *werkengall*, and

and in Germany by an appellation, which in Engliſh ſignifies *nine-killer*, from an idle ſuppoſition, that it kills nine birds every day; or at leaſt it deſtroys that number before it ceaſes. It is ſomewhat larger than a ſterling, it has a ſtrong black bill near an inch long, and hooked at the end; which, together with its carnivorous appetites, gives it a claim to rank among the carnivorous birds; though the ſlenderneſs of its legs, and the diſformation of the toes, give it, in ſome meaſure, the appearance of being a ſhade between them and the granivorous. The upper part of the body is of a reddiſh aſh-colour, the breaſt white, varied with a few dark coloured lines running acroſs each other, and it has a black line from the beak parallel with the eyes.

The conſtitution of this bird ſeems to be perfectly congenial with its conformation, as it lives equally as well upon fleſh as upon inſects, and thus partakes, in ſome meaſure, of a double nature; its appetite for fleſh is the moſt prevalent, and it never takes up with the latter when it can obtain the former; the butcher bird may therefore be ſaid to lead a life of continual combat and oppoſition; as from its ſize it does not much terrify the ſmaller birds of the

foreſt

foreſt, ſo it very frequently meets with thoſe willing to try their ſtrength, and it never declines the engagement.

It is wonderful to ſee with what intrepidity this little creature goes to war with the pie, the crow, and the keſtril, all above four times bigger than itſelf. It not only fights upon the defenſive, but often commences the attack, and always with advantage, particularly when the male and female unite to protect their young, and to drive away the more powerful birds of rapine; they do not then wait the approach of their invader; it is ſufficient that they ſee him preparing for the aſſault at a diſtance; which, whenever they obſerve, they ſally forth, attack him with fury, wound him on every ſide, that he is glad to make off, and ſeldom returns to the charge. In theſe diſputes, they generally come off with the victory, though it ſometimes happens that they fall to the ground with the bird they have ſo fiercely fixed upon, and the combat ends with the deſtruction of both.

While the kite, the buzzard, and the crow, who rather fear, than ſeek the engagement are deſpiſed, theſe are treated with the greateſt reſpect by the hawk and ſuperior birds of prey; and nothing in nature better diſplays the reſpect

paid to the claims of courage, than to ſee this little bird, apparently ſo contemptible, fly in company with the falcon, and all the tyrants of the air, without fearing their power, or avoiding their reſentment.

Small birds are its uſual food, whom it ſiezes by the throat, and ſtrangles them in an inſtant. And we have it aſſerted by the moſt undoubted authorities, that when it has killed the bird or inſect, it fixes them upon ſome neighbouring thorn, and when thus ſpitted, pulls them to pieces with its bill. This is another of thoſe grand powers of inſtinct ſo conſtantly occurring in animated nature, that leads us to an admiration of the wonderful preſcience of the Almighty Creator; for here is a ſmall animal without ſtrength, in its own perſon, to ſeparate the food it has provided, and yet poſſeſſing a ſagacity that the boaſted pre-eminence of men could not exceed to effectuate that purpoſe.

The *ſmall*, or *red butcher bird*, is not bigger than the wood-lark; it has an ill-ſhaped head, and about the mouth and noſtrils there grows a ſort of briſtles, or black hairs; the back and upper part of the wings are pretty much of the colour of ruſty iron; the head and rump is of an aſh-colour, and the lower parts of the body

body white, only upon the breaſt and throat, there is a ſmall mixture of red.

During ſummer, ſuch of this ſpecies, as conſtantly reſide here, for the one we have juſt deſcribed migrates, remain among the mountainous parts of the country; but in winter they deſcend into the plains and nearer human habitations. The larger kind make their neſts on the higheſt trees, while the leſſer build in buſhes in the fields, hedge-rows, and ſometimes amongſt the graſs upon the ground. They both lay about ſix eggs, of a white colour, encircled at the large end with a ring of browniſh red. The neſt on the outſide is compoſed of white moſs, interwoven with long graſs; within, it is well lined with wool, moſs, and downy herbs, and is uſually fixed among the forking branches of a tree. The female feeds her young with caterpillars and other inſects while very young; but ſhe ſoon accuſtoms them to fleſh, which the male procures with ſurpriſing induſtry. Their nature is alſo very different from other birds of prey in their parental care; for, ſo far from driving out their young from the neſt to ſhift for themſelves, they keep them with care; and even when adult they do not forſake them, but the whole

brood live in one family together. Each family lives apart, and is generally compoſed of the male, female, and five or ſix young ones: theſe all maintain peace and ſubordination among each other, and hunt in concert. Upon the returning ſeaſon of courtſhip this union is at an end, the family parts for ever, each to eſtabliſh a little houſehold of its own. It is eaſy to diſtinguiſh theſe birds at a diſtance, not only from their going in companies, but alſo from their manner of flying, which is always up and down, ſeldom direct or ſide-ways.

As we have already obſerved, there are ſeveral varieties in this ſpecies of birds, ſome nomenclators reckon upwards of forty, but the two we have deſcribed, carry the leading marks of the race; they are alſo the beſt known in this kingdom; the latter, or red butcher-bird migrates in autumn, and does not return till ſpring. The wood-chat reſembles the former except in the colour of the back, which is brown. There is ſtill another, leſs than either of the former, found in the marſhes near London, which is alſo a bird of prey, although not much bigger than a tit-mouſe. Of foreign birds of this kind there are ſeveral; but as we know little of their manner of living, we ſhall content

content ourſelves with the deſcription of one which is conſpicuous for the ſingularity and beauty of its form: it is called the *Malabar ſhriek*; in ſize it is about that of the miſſel thruſh; its back and the upper part of its wings are of a fine gloſſy black, intermixed with lively blue ſhades; it has a brilliant creſt on its head; the two outer feathers of its wings extend conſiderably beyond the reſt, and the ſtems of thoſe quills are deſtitute of feathers for more than half their length.

THE OWL.

THE various ſpecies of this animal are alſo to be reckoned among the carnivorous tribes, as they live upon the deſtruction of others; ſmall birds, young pidgeons, mice, and rats, are their common food. They are, however, diſtinguiſhable from all others from purſuing their prey at a time when the generality of animated beings have retired to reſt; and for this purpoſe their eyes, like thoſe of ſeveral of the carnivorous

carnivorous quadrupeds, are formed for ſeeing better when the ſun has declined below the horizon, and the veil of night has ſhaded the reſplendency of day. But although the ſight of owls may be completely dazzled by the glare of day, it is not to be concluded that they can ſee without ſome degree of light, ſince light is the medium of viſibility; on this ſubject an ingenious naturaliſt has ſaid, "that "ſome creatures have the pupil of their eyes extremely large, and which are not capable of that contraction requiſite for a great light. The generality of animals are naturally furniſhed with pupils, (or eye-ſights) that will encreaſe or diminiſh according to the degree of light by which they are encountered; as, for inſtance, when a man has been in the dark for a conſiderable time, and comes ſuddenly into a light place; or when a candle is brought into a dark room, the ſudden light dazzles the eye, becauſe the pupil of the eye was extended before, to co-operate with the act of viſibility; nor can the eye be at eaſe until it has again received a proper contraction for the quality of the light, and a due repreſentation of objects. This may alſo be confirmed by this experiment: cover one of your eyes, and the pupil of the other will dilate to ſupply the office of that

which

which is covered; uncover that eye again, and the other pupil will contract for the reaſon above; from whence it appears that owls being furniſhed with large eye ſights which admit not of contraction proper for great lights, can ſee beſt in leſſer ones, yet they cannot ſee at all where there is no light." This matter has, however, been moſt clearly aſcertained by M. de Buffon, as will be found in vol. iv. p. 137. of *Barr*'s Edition of that celebrated author's works.

From theſe, as well as many other reſpectable authorities, we find that, as in the eyes of the cat-kind, which are formed for nocturnal depredations, there is a quality in the retina that takes in the rays of light ſo copiouſly as to permit their ſeeing in places almoſt dark; ſo in theſe birds there is the ſame conformation of that organ, and though, like us, they cannot ſee in a total excluſion of light, yet they are ſufficiently quick-ſighted, at thoſe times when we remain in a total obſcurity; for beſides the uſual conformation, theſe birds have an irradiation on the back of the eye, and the very iris itſelf has a faculty of reflecting the rays of light, ſo as to aſſiſt viſion in the gloomy places where they principally inhabit.

It

It is, notwithſtanding, the duſk of the evening, or the grey of the morning, that is beſt fitted for their ſight, and not in the darkeſt night, as it has been pretended by thoſe who are fond of the marvellous. It is then that they iſſue from their retreats, to hunt or to ſurpriſe their prey, which is uſually attended with great ſucceſs: it is then that they find all other birds aſleep, or preparing for repoſe, and they have only to ſeize the moſt unguarded. It has been obſerved that when the moon ſhines, are the periods for their moſt ſucceſsful plunder; and this is partly corroborated by the fact that they contract the hours of their chace: and if they come out at the approach of duſk in the evening, they return before it is totally dark, and then ſally forth again by twilight the next morning to purſue their game, that they may be enabled to obtain a ſufficiency before the broad day light begins to dazzle them with its ſplendor.

The faculty of ſeeing in the night, or of being dazzled by day, is not alike in every ſpecies of theſe nocturnal birds: ſome ſee by night better than others; and ſome are ſo little dazzled by day-light, that they perceive their enemies and avoid them. For inſtance, there can be little doubt that the common White

or

or Barn Owl, ſees with ſuch acuteneſs in the dark, that though the barn in which he has taken refuge, be cloſe ſhut at night, and the light thus totally excluded, can perceive the ſmalleſt mouſe that peeps from its hole, and which he is certain of making his prey; while on the other hand, the Brown Horned Owl is often ſeen to prowl along the hedges by day, like the ſparrow-hawk; and by that means fall upon his unwary victims.

All the birds of this ſpecies may be divided into two ſorts; thoſe that have horns, and thoſe without. Theſe horns are nothing more than two or three feathers that ſtand up on each ſide of the head over the ears, and thus give this animal a kind of horned appearance. In the enumeration of this claſs, we muſt begin with thoſe ſo diſtinguiſhed, and at the head of which ſtand what is called the *great horned owl*; (*fig.* 8.) his ſize is, in reality, about that of a common pullet, although he appears to be conſiderably larger, from the method he has of keeping his feathers quite looſe, and ſometimes almoſt of an end; he has very long hairs on the upper eye-lid, and from a mode of drawing a ſkin or film over his eye in day time, he always looks as though he was aſleep; round his eye,

which is large, is an iris of an orange colour; on the upper part of his head, inſtead of ears, he has ſome prominent feathers which he can raiſe or fall at pleaſure. His face, as is the general characteriſtic of the owl kind, is very different to that of other birds, being almoſt flat; his beak, which is white, ſtands out nearly in the manner of the noſe in the human ſpecies; over this is a flat forehead, and between them his eyes are ſunk in a deep cavity; his back is of a reddiſh brown, a little variegated with white, and a yellowiſh white on the belly; the thighs are covered with white feathers, and its feet are hairy. It inhabits the openings of rocks, the cavities of old towers, and the hollows of oaks, and other decayed trees in the foreſts. It feeds upon mice and ſmall birds, and we are aſſured by a reſpectable author, that when it meets with any of thoſe little animals by chance, it ſwallows them whole, its throat being ſo large as to take down the eggs of ducks and geeſe, which are ſometimes its food.

Next to this is the *common horned owl*, differing only in ſize, being much ſmaller than the former. The horns of this owl are but about an inch long, and conſiſt of ſix feathers, variegated with black and yellow. They ſeldom

trouble

trouble themſelves with making a neſt, but generally take poſſeſſion of an old magpie's or buzzard's. They lay four or five eggs. The young are white at firſt, but come to their colour in fifteen days. This ſpecies are common in France and England.

This is followed by the *little-horned owl*, which is not much bigger than a common blackbird; it has a black bill, the feathers about the face are variegated with black and white, thoſe near the eyes being ſomewhat red; its horns are of a yellowiſh white, compoſed of one feather, and that not an inch long; its body is of different colours, as white, yellow, black, red, and brown, beautifully intermixed; its legs are brown, and feathered down to the feet, and has black claws; this is a very ſolitary bird, and ſeems to have been but little known to the ancients: it is ſuppoſed to be a bird of paſſage, coming into theſe climates in October and retiring again in ſpring. There is another of this ſpecies, called the *ſcops*, ſtill ſmaller than the laſt, but which it reſembles in moſt reſpects. It is, however, only ſeven or eight inches long; its horns conſiſt of two feathers, which are juſt elevated above the others. In France it appears as a

bird of paſſage, but it is dubious whether it ever viſits England.

Of the tribe without horns, the *howlet*, eſtimating according to ſize, ſtands in the firſt place, yet it is not ſo large as the great-horned owl; this is alſo peculiar from having black eyes, and its plumage is in general of a duſky colour.

The *ſcreech-owl* is rather leſs than a common kite; it has blue eyes, and is of a kind of a bluiſh-grey colour, except the belly and thighs, which are of a lead colour, ſometimes inclining to white.

The *white*, or *barn owl*, is nearly of the ſize of the preceding; it has a white hooked bill, near an inch long, round which is a ſmall circle of yellow feathers, its eyes are yellow; the breaſt, belly, and under the wings, are white, its back and covert wings ſhaded with yellow, and its legs are covered with a thick down as low as the feet.

The *brown owl* differs very little from the former, except in the colour of its beak and plumage, the former of which is brown, and the latter of the ſame colour, ſomewhat mottled.

The

The *little brown owl* does not exceed the ſize of a blackbird; it has yellowiſh eyes, an orange-coloured bill; the body is a dark brown, with a mixture of red, with ſeveral white and black ſpots; the lower part of the body is of a yellowiſh white, with ſome duſky ſpots; the feet are yellow, feathered down to the claws, of which it has two before and two behind. This bird has been met with in England but very rarely.

Beſides theſe, there are above thirty other varieties of this ſpecies of animals reckoned as exiſting in different parts of the globe.

However they may differ in their ſize and plumage, the whole of theſe birds agree in their general characteriſtics of preying by night, and having their eyes formed for nocturnal viſion. Their bodies are ſtrong and muſcular; their feet and claws made for tearing their prey; and their ſtomachs for digeſting it. It muſt be remarked, however, that the digeſtion of all birds that live upon mice, lizards, or ſuch like food, is not very perfect; for though they ſwallow them whole, yet they are always ſeen ſome time after to diſgorge the ſkin and bones, rolled up in a pellet, as being indigeſtible.

Being

Being incapable of ſupporting the light of the day, at leaſt ſufficiently to perceive and avoid danger, they keep all this time concealed in ſome obſcure retreat, ſuited to their gloomy diſpoſitions, and there continue in perfect ſilence. The cavern of a rock, the darkeſt part of an hollow tree, the battlements of a ruined and unfrequented caſtle, or ſome obſcure hole, in a farmer's out-houſe, are the places where they are uſually found; and if they are ſeen out of theſe retreats in the day-time they may be conſidered as having loſt their way, and unable to find a place of ſecurity.

At the approach of evening they ſally forth, and ſkim rapidly up and down along the hedges. The great horned owl is the foremoſt in leaving his retreat, and ventures into the woods and thickets very ſoon in the evening: the brown and other owls are later in their excurſions, ſetting off in proportion as their eyes will bear the light. The barn-owl, indeed, who lives chiefly upon mice, is contented to be ſtationary: he takes his reſidence upon ſome ſhock of corn, or the point of ſome old houſe, and there watches in the dark, with unremitting perſeverance, the motions of his prey. Each of theſe ſpecies have a particular cry, or rather ſcream,

ſcream, which they generally make uſe of on quitting their ſolitary holds; from the time at which it is heard, ſilence and darkneſs being ſpread around, their hideous notes excite a degree of horror: it is, conſidered in them as a teſtimony of joy at being enabled to quit their ſolitary abodes, and alſo as a call of love to their ſeparated mates; and this is more particularly ſuppoſed to be the caſe, ſince they are never heard when after their prey; that important purſuit is always attended with ſilence; otherwiſe they would diſturb or forwarn thoſe little animals they wiſh to ſurpriſe. When their purſuit has been ſucceſsful they ſoon return to their ſolitude; but if they find but little game they continue their queſt ſtill longer; and it ſometimes happens that, obeying the dictates of appetite rather than of prudence, they continue their reſearches until broad day breaks in upon them, and leaves them dazzled, bewildered, and unable to trace their way back. In this diſtreſs they are obliged to take ſhelter in the firſt tree or hedge that offers, where they continue concealed until the returning darkneſs once more befriends their ſight, and aſſiſts them to find their home. But it often happens that, with all their precaution to conceal

ceal themſelves, they are ſpied out by the other birds which haunt the ſpot of their retreat; and in which caſe from them they are ſure to receive no mercy. The blackbird, thruſh, jay, bunting, and even red-breaſt, advance to the attack, and employ all their little arts of inſult and abuſe. The ſmalleſt, feebleſt, and moſt contemptible of this unfortunate bird's enemies are then the foremoſt to injure and torment him. They increaſe their cries and turbulence round him, flap him with their wings, and, like many ſwaggerers of the human race, are ready to ſhew their courage to be great as they are ſenſible that their danger is but ſmall. The unfortunate owl, not knowing where to attack, how to avoid his foes, or whither to fly, ſits quietly, and patiently ſubmits to the efforts of their malice. Aſtoniſhed and dizzy, he only replies to their mockeries by aukward and ridiculous geſtures, by turning his head and rolling his eyes with an air of ſtupidity. It is enough that an owl appears by day to ſet the whole grove into a kind of uproar. Either the averſion all the ſmall birds have to this animal, or the conſciouſneſs of their own ſecurity, makes them purſue him without ceaſing, while they encourage each other

other by their mutual cries to lend aſſiſtance in this laudable undertaking. But in this they are not always guided by caution, as they will ſometimes continue their inſults with that ſame imprudent zeal with which the owl himſelf had purſued his depredations. They will continue their tormenting inſults until the evening begins to return, which reſtoring him his faculties of ſight, he makes the foremoſt of his purſuers pay dear for their former ſport.

Of this inveteracy of the ſmall birds to the owl, and of their folly, man has not failed to take the advantage; the bird-catchers ſometimes get into a well-frequented grove, having acquired the art of counterfeiting the cry of the owl exactly, and having previouſly limed the branches of an hedge, they ſit unſeen and give the call. At this, all the birds within hearing flock to the place where they expect to find their well-known enemy; but inſtead of finding their ſtupid antagoniſt they are ſtuck faſt to the hedge themſelves. This manœuvre is commonly put in practice an hour before night-fall, as being then moſt ſucceſsful; for if it is put off till later, thoſe birds, which but a few minutes ſooner would come to provoke their enemy, will then fly from him with as much

much terror as they juſt before would have ſhewed inſolence.

The great horned owl is ſometimes made uſe of to lure the kite, when falconers deſire to catch him for the purpoſes of training up their young falcons. Upon this occaſion they clap the tail of a fox to the great owl to render his figure extraordinary, in which trim he ſails ſlowly along, flying low, which is his uſual manner. The kite, either curious to obſerve this odd kind of animal, or perhaps inquiſitive to ſee whether it may not be proper for food, flies after, and continues to hover, deſcending by degrees, till the falconer conſiders him ſufficiently near, when he ſets off a ſtrong-winged hawk, who is certain of making him his prey.

The great horned owl uſually breeds in the cavern of a rock, the hollow of a tree, or the turret of ſome ruined caſtle. Its neſt is near three feet in diameter, and compoſed of ſticks, bound together by the fibrous roots of trees, and lined with leaves on the inſide. It lays from two to three eggs, which are larger than thoſe of a hen, and of a colour ſomewhat reſembling the bird itſelf. The young ones are very voracious, and the parents very aſſiduous

in

in ſatisfying their calls of hunger. The leſſer owl of this kind never makes a neſt for itſelf, but always takes up with the old one of ſome other bird, which it has often been forced to abandon. It lays four or five eggs; and the young are all white at firſt, but change colour in about a fortnight. The other owls in general build near the places where they chiefly ſeek their prey; thoſe which feed on birds in ſome neighbouring grove, and thoſe which prey upon mice near ſome farmer's yard, who derives too much from his ſervices not to endeavour to give him ſecurity; for whatever miſchief one ſpecies of owl may do in the woods, the barn-owl makes a ſufficient recompence, by being equally active in deſtroying mice nearer home; indeed a ſingle owl is conſidered as more ſerviceable than half a dozen cats, in ridding a barn of its domeſtic vermin. "In the year 1580," ſays an old writer, "at Hallontide, an army of mice ſo over-run the marſhes near Southminſter, that they eat up the graſs to the very roots. But at length a great number of ſtrange painted owls came and devoured all the mice. The like happened again in Eſſex about ſixty years after."

We cannot better conclude our account of this ſpecies, than in the words of M. de Buffon, who ſays, "Owls in general are very ſhy of man, extremely indocile, and very hard to be tamed, particularly the white owl, whom we could never preſerve alive for any time in a ſtate of captivity; we have kept them for ten or twelve days in the aviary, where they were ſhut up; but they refuſed all kind of nouriſhment, and at laſt died with hunger. By day they remained without moving upon the floor of the aviary; in the evening they mounted on the higheſt perch, where they continued to make a noiſe like a man ſnoring with his mouth open. The doing of which had every appearance of being intended as a cry or call to their old companions without; and, in fact, I have ſeen ſeveral others come to the call, and perch upon the roof of the aviary, where they made the ſame kind of ſcream, and were ſo inattentive to every other circumſtance as to ſuffer themſelves to be taken with a net."

OF THE POULTRY KIND.

HAVING thus fully deſcribed the moſt rapacious ſpecies of the feathered race, we ſhall quit the noxious tribe for the preſent, and bring forward thoſe who are of ſuch material advantage and benefit to man. In theſe we find exact ſimilitude with the quadrupeds, namely, that in both orders there are ſome rendered domeſtic, while others, no leſs ſalutary food, ſtill preſerve their freedom, and have not ſubmitted to the controul and tyranny of man. The ox, the ſheep, and goat, are not more obedient nor more familiar with their deſtroyers, than are the cock, the turkey and the peacock; nor are the ſtags, fallow-deer, and roe-buck, more independant than the buſtard, pheaſant and partridge; but without dwelling upon theſe ſemblances, which to point out is ſufficient for the curious, we ſhall enter into a more general view of what are commonly

monly ranked under the denomination of the poultry kind, which has been moſt ingeniouſly characterized by Dr. Goldſmith, who, on this ſubject, ſays:

"Under birds of the poultry kind are to be ranked all thoſe that have white fleſh, and, comparatively to their head and limbs, have bulky bodies. They are furniſhed with ſhort ſtrong bills for picking up grain, which is their chief and often their only ſuſtenance. Their wings are ſhort and concave; for which reaſon they are not able to fly far. They lay a great many eggs; and, as they lead their young abroad the very day they are hatched, in queſt of food, which they are ſhewn by the mother, and which they pick up for themſelves, they generally make their neſts on the ground. The toes of all theſe are united by a membrane as far as the firſt articulation, and then are divided as in thoſe of the former claſs.

Under this claſs we may therefore rank the common cock, the peacock, the turkey, the pintada or Guinea hen, the pheaſant, the buſtard, the grous, the partridge, and the quail. Theſe all bear a ſtrong ſimilitude to each other. being equally granivorous, fleſhy, and delicate to the palate. Theſe are among birds what beaſts

beaſts of paſture are among quadrupeds, peaceable tenants of the field, and ſhunning the thicker parts of the foreſt, that abounds with numerous animals who carry on unceaſing hoſtilities againſt them.

" As Nature has formed the rapacious claſs for war, ſo ſhe ſeems equally to have fitted theſe for peace, reſt, and ſociety. Their wings are but ſhort, ſo that they are ill formed for wandering from one region to another; their bills are alſo ſhort, and incapable of annoying their oppoſers; their legs are ſtrong indeed, but their toes are made for ſcratching up their food, and not for holding or tearing it. Theſe are ſufficient indications of their harmleſs nature; while their bodies, which are fat and fleſhy, render them unwieldy travellers, and incapable alſo of ſtraying far from each other.

" Accordingly we find them chiefly in ſociety, they live together, and though they may have their diſputes, like all other animals upon ſome occaſions; yet, when kept in the ſame diſtrict, or fed in the ſame yard, they learn the arts of ſubordination; and, in proportion as each knows his ſtrength, he ſeldom tries

tries a ſecond time the combat where he has once been worſted.

" In this manner, all of this kind ſeem to lead an indolent voluptuous life; as they are furniſhed internally with a very ſtrong ſtomach, commonly called a *gizzard*, ſo their voraciouſneſs ſcarce knows any bounds. If kept in cloſe captivity, and ſeparated from all their former companions, they ſtill have the pleaſure of eating left; and they ſoon grow fat and unwieldy in their priſon. To ſay this more ſimply, many of the wilder ſpecies of birds, when cooped or caged, pine away, grow gloomy, and ſome refuſe all ſuſtenance whatever; none except thoſe of the poultry kind grow fat, who ſeem to loſe all remembrance of their former liberty, ſatisfied with indolence and plenty.

" The poultry kind may be conſidered as ſenſual epicures, ſolely governed by their appetites. The indulgence of theſe ſeems to influence their other habits, and deſtroys among them that connubial fidelity for which moſt other kinds are remarkable. The eagle and the falcon, how fierce ſoever to other animals, are yet gentle and true to each other; their connections, when once formed, continue till death

death; and the male and female in every exigence, and every duty, lend faithful aſſiſtance to each other. They aſſiſt each other in the production of their young, in providing for them when produced; and even then, though they drive them forth to fight their own battles, yet the old ones ſtill retain their former affection to each other, and ſeldom part far aſunder.

" But it is very different with this luxurious claſs I am now deſcribing. Their courtſhip is but ſhort, and their congreſs fortuitous. The male takes no heed of his offspring; and ſatisfied with the pleaſure of getting, leaves to the female all the care of providing for poſterity. Wild and irregular in his appetites, he ranges from one to another; and claims every female which he is ſtrong enough to keep from his fellows. Though timorous when oppoſed to birds of prey, yet he is incredibly bold among thoſe of his own kind; and but to ſee a male of his own ſpecies is ſufficient to produce a combat. As his deſires extend to all, every creature becomes his enemy that pretends to be his rival.

" The female, equally without fidelity or attachment, yields to the moſt powerful. She

ſtands by, a quiet meretricious ſpectator of their fury, ready to reward the conqueror with every compliance. She takes upon herſelf all the labour of hatching and bringing up her young, and chuſes a place for hatching as remote as poſſible from the cock. Indeed, ſhe gives herſelf very little trouble in making a neſt, as her young ones are to forſake it the inſtant they part from the ſhell.

" She is equally unaſſiſted in providing for her young, which are not fed with meat put into their mouths, as in other claſſes of the feathered kind, but peck their food, and forſaking their neſts, run here and there, following the parent wherever it is to be found. She leads them forward where they are likely to have the greateſt quantity of grain, and takes care to ſhew, by pecking, the ſort proper for them to ſeek for. Though at other times voracious, ſhe is then abſtemious to an extreme degree; and, intent only on providing for and ſhewing her young clutch their food, ſhe ſcarce takes any nouriſhment herſelf. Her parental pride ſeems to overpower every other appetite; but that decreaſes in proportion as her young ones are more able

to

to provide for themſelves, and then all her voracious habits return.

" Among the other habits peculiar to this claſs of birds is that of duſting themſelves. They lie flat in ſome duſty place, and with their wings and feet raiſe and ſcatter the duſt over their whole body. What may be their reaſon for thus doing it is not eaſy to explain. Perhaps the heat of their bodies is ſuch, that they require this powder to be interpoſed between their feathers to keep them from lying too cloſe together, and thus increaſing that heat with which they are incommoded." In this laſt conjecture, however, naturaliſts do not agree, and it has, with greater ſeeming probability, been accounted for by the ſuppoſition, that from a moiſture ariſing from the body, filth is collected under the feathers, and that the only method they have to rid themſelves of this inconvenience, is by a plentiful introduction of dry duſt, which connecting with the other they are thus enabled to clean themſelves by ſhaking it all out together.

THE BUSTARD.

THIS bird (*fig.* 10) has no other claim to taking the lead in this race than that of being the largeſt land-bird that we are familiar with in Europe. They were formerly very numerous in England; but the increaſed cultivation of the country, and the extreme delicacy of their fleſh, has greatly thinned the ſpecies; and it is very poſſible, that a time may come when it will be a doubt whether ſo large a bird was ever bred among us; nay, it is probable, that long before this the buſtard would have been extirpated, but for its peculiarity in the places it has choſen to reſide in. Had it ſought ſhelter among our woods, in proportion as they were cut down, it muſt have been deſtroyed. Beſides, if it had dwelt in the foreſts, the fowler might have approached it without being ſeen, and its ſize would have rendered it too conſpicuous a mark to be eaſily miſſed; but inſtead of this it inhabits only the open and extenſive plain, where

FIG.10.
Bustard.

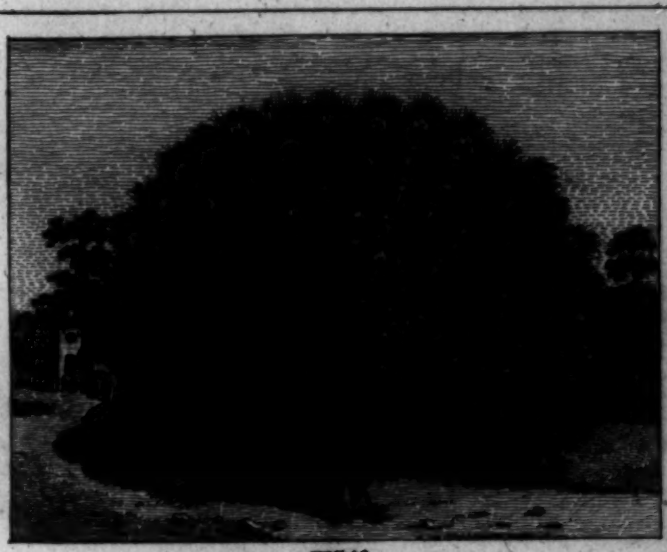

FIG.13.
Peacock.

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where its food lies in abundance, and where, at a diſtance, it can clearly obſerve the motions of an approaching enemy.

The buſtard is much larger than the turkey, the male generally weighing from twenty-five to twenty-ſeven pounds. The neck is a foot long, and the legs a foot and an half. The wings, although diſproportioned to its ſize, not being more than four feet when extended from tip to tip, are nevertheleſs ſo formed as to elevate it in the air, and enable it to fly with ſome little difficulty. The head and neck of the male are aſh-coloured; the back is barred tranſverſely with black, bright, and ruſt-colour. The greater quill-feathers are black, the belly white, and the tail, which conſiſts of twenty feathers, is marked with broad black bars; it has three thick toes before, and none behind.

We find the buſtard mentioned by Plutarch as being in his time a very common bird in Greece and Syria, and that they were found in great numbers in the environs of Alexandria and Lybia; they are alſo pretty general in the open parts of France and Spain, and particularly in the open plains of Poitou and Champagne. In England they are frequently ſeen in

in flocks of fifty or more together, eſpecially on the extenſive downs of Saliſbury Plains, the heaths of Suſſex and Cambridgeſhire, the Dorſetſhire uplands, and ſo on, as far as Eaſt Lothian in Scotland. In thoſe extenſive plains, where there are no woods to ſcreen the ſportſman, nor hedges to aid him in his deſtructive deſign, the buſtards enjoy an indolent ſecurity. Their food is compoſed of the berries that grow among the heath, and the large earth-worms that appear in great quantities on the downs before ſun-riſing in ſummer. It is in vain that the fowler makes uſe of his art to approach them, for they have conſtantly centinels placed at proper eminences, always on the watch, to warn the flock of the ſmalleſt appearance of danger. The eager ſportſman has, therefore, the frequent mortification of beholding plenty of game without the poſſibility of getting near them, as being in view is ſufficient for them to take wing. Notwithſtanding it is ſo difficult to approach them within gun-ſhot, they are often run down by grey-hounds. As they are voracious and greedy they often ſacrifice their ſafety to their appetite, by feeding themſelves ſo very fat that they are unable to fly without great preparation. When

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the greyhound, therefore, comes within a certain diſtance, for it is not ſo ſhy of the dog as of man, the buſtard runs off flapping its wings, and endeavouring to gather air enough under them to riſe, till the rapid approach of the enemy renders it too late for him even to think of obtaining ſafety by flight; for juſt at the riſe there is always time loſt, and of this the bird is ſenſible; it continues, therefore, on the foot, attempting to gain a ſufficient diſtance before it ventures on flight, and in which attempt it is frequently outrun, and becomes a prey to its purſuer. Ælian ſays that nothing is more eaſy than the capture of this bird, and he affirmed, as a fact, that, in the kingdom of Pontus, the foxes make uſe of the following ſtratagem in order to take them:—The fox elevates his buſhy tail, which he cauſes to imitate as much as poſſible the motions of the bird's neck; the buſtards, he adds, which miſtake it for a bird of their ſpecies, approach it without apprehenſion, and become the prey of this crafty animal.

Being ſo attached to the ſecurity of an open country, there are few places where they can at once find proper food and ſafety, therefore they generally continue near their old haunts, ſeldom

ſeldom wandering above twenty or thirty miles from home. As their food is replete with moiſture it enables them to live upon theſe dry plains, where there are ſcarcely any ſprings of water, a long time without drinking. Beſides this, Nature has given the males an admirable magazine for their ſecurity againſt thirſt. This is a pouch, the entrance of which lies immediately under the tongue, and, if we may credit ſome authors, is capable of holding near ſeven quarts of water. This he is ſuppoſed to fill upon particular occaſions, eſpecially to ſupply the hen when ſitting, and the young before they can fly, and procure it for themſelves.

They poſſeſs no lengthened attachment, but ſelect their mates at the ſeaſon of incubation, which is about the latter end of ſummer. They then ſeparate in pairs, if there be a ſufficiency of females for the males; but when it happens otherwiſe the males fight until one of them falls. They make no neſts, any farther than ſcraping a hole in the earth, and ſometimes lining it with a little long graſs or ſtraw. There they lay two eggs only, almoſt of the ſize of a gooſe egg, of a pale olive brown, marked with ſpots of a darker colour. The time

time of incubation is about five weeks, and the young ones run about as ſoon as they are out of the ſhell; which is the caſe with all that come under the denomination of the poultry kind.

It is ſaid that when the hen is apprehenſive of the hunters, and is diſturbed from her neſt, ſhe takes her eggs under her wings, and tranſports them to a place of ſafety. But this appears to be one of thoſe circumſtances that has originated among the lovers of the marvellous.

The fleſh of theſe birds has ever been conſidered as a great delicacy, and therefore invariably the object of purſuit; beſides which their quills are held in high eſtimation among anglers, who uſe them as floats; for, as they are ſpotted with black, the notion is, that theſe black ſpots appear as flies to the fiſh, and therefore rather allure than drive them away.

By obſervation and attention it has been diſcovered that the buſtards aſſemble in flocks in the month of October, and keep together till April; and that in winter, as their food becomes more ſcarce, they ſupport themſelves indiſcriminately, by feeding on moles, mice, and even little birds, when they can ſeize them.

For want of other food they will live upon turnip-leaves, and ſuch like ſucculent vegetables. In ſome part of Switzerland they are found frozen in the fields in ſevere weather, but when taken to a warm place they again recover. They are ſuppoſed to live about fifteen years, but are incapable of being propagated in a domeſtic ſtate, probably from not having a ſupply of that peculiar food which may be neceſſary to their conſtitution.

The *little buſtard* differs only from the preceding in being of a ſmaller ſize, being not larger than a pheaſant, or about ſeventeen inches in length. This ſpecies is found in many parts of Europe. It is, however, by no means common in France, and has only been met with three or four times in England.

There are ſix or ſeven ſpecies of this kind, two or three of which, particularly the *houbara* and the *rhaad* (both African birds), are creſted, and different from the European ones, by ſome varieties in their plumage; but there are not any of the ſpecies found in America.

Cock.

Turkey.

OF THE COCK.

FAMILIAR as this bird is to all, yet its variety is ſo great, that the moſt able naturaliſts have invariably expreſſed a difficulty in pointing out its diſtinctive characters, and for this obvious reaſon, that there are ſcarcely two birds of this ſpecies that exactly reſemble each other in plumage and form. If we take for the mark of the genus its four toes, what then becomes of the peculiar ſpecies which has five on each foot? If the erect and peculiar poſition of the tail be aſſumed, there is a ſpecies wholly deſtitute of this character. If we would ſay that the cock is only feathered to the lower joint of the leg, there are ſome breeds which are feathered even to the toes, and that of Japan has feathers even to the very nails. In fine, if we would claſs him among granivorous birds, we muſt allow ſome latitude even in this, ſince he

devours greedily not only earth worms, but in many caſes, both fiſh and fleſh.

Of the period when this bird was firſt introduced into Europe, all our reſearches will not enable us even to preſume a conjecture; but it ſeems admitted on all hands that the cock is one of the oldeſt companions of mankind, and that he was among the firſt who were drawn from the wilds of the foreſt, to become a partaker of the advantages of ſociety. Although it does not appear at what period this took place, yet it is pretty certain that the firſt accounts we have of the cock, is from the annals of Perſia, and to which kingdom the weſtern parts of the univerſe are certainly indebted for him.

Ariſtophanes calls the cock the *Perſian bird*, and tells us he enjoyed that kingdom before ſome of its earlieſt monarchs. This animal was in fact known ſo early even in the moſt ſavage parts of Europe, that we are told the cock was one of the forbidden foods among the ancient Britons. Indeed, the domeſtic fowl ſeems to have baniſhed the wild one. Perſia itſelf, that firſt introduced it to our acquaintance, ſeems no longer to know it in its natural form; it is nevertheleſs ſtill found wild in the

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iſlands of Tinian, in many others of the Indian ocean, and in the woods on the coaſts of Malabar, in his ancient ſtate of independence. In his wild ſtate his plumage is black and yellow, and his comb and wattles yellow and purple. Of theſe, in the wild ſtate, eſpecially in the Indian woods, a very particular circumſtance is related as a fact, namely, that when boiled, their bones become as black as ebony. Whether this tincture proceeds from their food, as the bones are tinctured red by feeding upon madder, we do not pretend to determine, any more than to vouch for the fact; it is ſufficient for us to have given the aſſertion of ſeveral authors of general credit.

Among the ancients, at leaſt the Europeans, after this bird's firſt introduction among them, thoſe whoſe feathers were of a reddiſh caſt, were conſidered as invaluable; but thoſe whoſe plumage was white, they conſidered as unfit for domeſtic purpoſes; even Ariſtotle has treated of them as being the leaſt fruitful of the two; the firſt he calls generous aud noble, being remarkable for fecundity; the other ignoble and uſeleſs, from their ſterility. Theſe diſtinctions differ widely from our modern experience, the generous *game-cock* being by no means

means ſo fruitful as the ungenerous *dunghill-cock*, which has been treated with ſuch contempt.

Without dwelling on this diſtinction, it is certain that no animal in the world has greater courage than the cock, when oppoſed to one of his own ſpecies; and in every part of the world, cock-fighting has long been a favourite and principal diverſion. In China, India, the Philipine iſlands, and all over the Eaſt, cock-fighting is the ſport and amuſement even of kings and princes. England has long had the credit of producing a bolder and more valiant breed than is to be found in any other country; but in theſe later times it is poſitively aſſerted that they have cocks in China as bold, if not bolder, than ours; and, what would ſtill be conſidered as valuable among the admirers of this ſport, they have more ſtrength with leſs weight.

Naturaliſts have attributed the extraordinary courage in the cock to his being the moſt ſalacious of all other birds whatſoever. A ſingle cock ſuffices for ten or a dozen hens; and it is ſaid of him that he is the only animal whoſe ſpirits are not abated by indulgence. But then he ſoon grows old; the radical moiſture is exhauſted;

exhauſted; and in three or four years he becomes utterly unfit for the purpoſes of impregnation. "Hens alſo, (ſays Willoughby) as they for the greateſt part of the year daily lay eggs, cannot ſuffice for ſo many births, but for the moſt part after three years become effete and barren: for when they have exhauſted all their ſeed-eggs, of which they had but a certain quantity from the beginning, they muſt neceſſarily ceaſe to lay, there being no new ones generated within."

The formation of the embryo is curious. During the firſt day's incubation, and even when the egg has been under the hen a few hours, the head of the chicken may be ſeen gradually uniting itſelf to the ſpine of the back. On the ſecond day the firſt proceſſes of the vertebræ may be diſcerned like ſo many ſmall globules diſpoſed on each ſide of the ſpine. The firſt commencement of the wings and the umbilical veſſels may alſo be diſtinguiſhed by their dark colour. The neck and the breaſt alſo ſhew themſelves, and the head continues to increaſe in ſize. The third day the whole is more diſtinct and enlarged, and the heart, which is ſuſpended at the opening of the breaſt, is obſerved to beat; veins and arteries

arteries may alſo be perceived about the brain, and the ſpinal marrow begins to extend itſelf through the ſpine. The eyes are conſiderably formed on the fourth day. The pupil, the chryſtalline, and vitreous humours may be diſtinctly ſeen. The wings increaſe, the thighs appear, and the whole body begins, in ſome degree, to be covered with fleſh. The fifth day the body is covered with a glutinous or unctuous fleſh, the heart is retained within a very fine membrane, which alſo extends itſelf all over the breaſt. The ſixth day the ſpinal marrow, in two diviſions, continues to advance along the trunk; the liver, which at firſt was whitiſh, becomes of a darker hue; both ventricles of the heart beat, and the body of the chicken is covered with ſkin, in which may be already diſcerned the points of the feathers. The beak may be diſcovered on the ſeventh day, and the brain, the wings, the thighs, and even the feet, have acquired a perfect form. The lungs appear at the end of the ninth day; their colour is whitiſh. On the tenth the muſcles of the wings begin to form, the feathers continue to ſhoot out. It is not till the eleventh day that the arteries, which before were ſeparate, unite to the heart. The reſt of

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the proceſs conſiſts only in an increaſe and more perfect developement of the ſeveral parts, till they acquire ſufficient vigour to break the ſhell.

A common hen, if at liberty, and well fed, will produce more than one hundred and fifty eggs in a year; and it is no uncommon thing for them to have two broods of chickens in the year. For the hen to have eggs it is by no means neceſſary that ſhe ſhould be in company with a cock; ſhe will continue to lay, although the eggs of this kind can never be brought to produce a living animal. "But, ſays M. de Buffon, when the hen has cohabited with the cock for a few days, and afterwards ſeparated from him, the eggs ſhe produces for a month, after ſeparation, are as fertile as thoſe ſhe produced during the time of cohabitation with the male, and unfold at the ſame time." The hen makes her neſt without any care, if left to herſelf; a hole ſcratched into the ground, among a few buſhes, is the only preparation ſhe makes for the office of incubation. Nature, almoſt exhauſted by its own fecundity, ſeems to inform her of the proper time for hatching, which ſhe herſelf teſtifies by a clucking noiſe, and by diſcontinuing to lay. But this

inclination for ſetting is frequently poſtponed by thoſe who prefer eggs to chickens, by dipping her head a few times in cold water. If left entirely to herſelf ſhe would ſeldom lay above twenty eggs in the ſame neſt, without attempting to hatch them, but this inclination is ſtopped by the removal of her eggs, and ſhe continues to lay, vainly hoping to increaſe the number.

During the time of incubation nothing can exceed the patience and perſeverance of the hen; ſhe will ſometimes remain for whole days together without moving from her neſt, ſcarce ever quitting it more than once in twenty-four hours; then it is from the preſſure of hunger, and ſhe devours her food with all imaginable haſte, barely allowing herſelf time to take a ſufficiency for the ſupport of nature. While the hen ſits ſhe carefully turns her eggs, and even removes them to different ſituations; till at length, in about three weeks, the young brood begin to give ſigns of a deſire to burſt their confinement, which they are ſuppoſed to effectuate by repeated efforts with their bills againſt the ſhells, aſſiſted in ſome little degree by the hen, who, when they are all produced, leads them forth to provide for themſelves.

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Her affection and her pride ſeem then to alter her very nature, and correct her imperfections. No longer voracious or cowardly, ſhe abſtains from all food that her young can ſwallow, and flies boldly at every creature that ſhe thinks is likely to do them miſchief: ſhe boldly attacks the horſe, the hog, or any other animal ſhe ſuſpects inclined to injure her progeny. When marching at the head of her little troop ſhe acts the commander, and has a variety of notes to call her train to their food, or to warn them of approaching danger.

In general ten or twelve chickens are as many as a good hen can produce or rear at one time; but as this bears no proportion to the number of her eggs, ſchemes have been tried to clutch all the eggs of an hen, and thus turn her produce to the greateſt advantage; which being effectuated, an hen may be ſaid to produce upwards of an hundred and fifty of her own ſpecies in a year. This contrivance is the artificial method of hatching chickens in ſtoves, as is practiſed at Grand Cairo; or in a chemical elaboratory properly graduated, as has been effected by Mr. Reaumur. At Grand Cairo they thus produce ſix or ſeven thouſand chickens at a time; where, as they are brought

forth in their ſpring, which is warmer than our ſummer, the young ones thrive without clutching. But it is otherwiſe in our colder and unequal climate; the little animal may, without much difficulty, be hatched from the ſhell; but they almoſt all periſh when excluded. To remedy this, Reaumur made uſe of a woollen hen, as he calls it; which was nothing more than putting the young ones in a warm baſket, and clapping over them a thick woollen canopy; but a much better ſubſtitute is ſometimes made uſe of, namely that of capons, who are frequently thus employed; and the manner of teaching them is this: firſt the capon is made very tame, ſo as to feed from the hand; then, about evening, they pluck the feathers off his breaſt, and rub the bare ſkin with nettles; they then put the chickens to him, which preſently run under his breaſt and belly, and probably rubbing his bare ſkin gently with their heads allay the ſtinging pain which the nettles had juſt produced. This is repeated for two or three nights, till the animal takes an affection to the chickens that have thus given him relief, and continues to give them the protection they ſeek for. He, from that time, brings up a brood of chickens like a

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hen, clutching them, feeding them, clucking, and performing all the functions of the tendereſt parent. A capon once accuſtomed to this ſervice will not give over, but when one brood is grown up, he may have another juſt hatched put under him, which he will treat with the ſame tenderneſs he did the former.

The cock, from his ſalaciouſneſs, is allowed to be a ſhort-lived animal, but how long they live, if left to themſelves, is not yet well aſcertained. As they are kept only for profit, and in a few years become unfit for generation, there are few that, from mere motives of curioſity, will make the tedious experiment of maintaining a proper number till they die: Aldrovandus hints their life to be of about ten years extent, but the probability is in favour of its being much longer. They are ſubject to ſome diſorders, and as for poiſons, beſides nux vomica, which is fatal to moſt animals except man, they are injured, as Linnæus aſſerts, by elder-berries, of which they are not a little fond.

There are various accounts of the original of the barbarous cuſtom that has ſo long obtained, of throwing at theſe creatures, on a Shrove-

Shrove-Tueſday; but that of one Cranenſtein, an old German author, does by no means ſeem an improbable one; he ſays, when the Danes were maſters of England, and lorded it over the natives of the iſland, the inhabitants of a certain great city, grown weary of their ſlavery, had formed a ſecret conſpiracy to murder their maſters in one bloody night, and twelve men had undertaken to enter the town-houſe by ſtratagem, and ſeizing the arms, ſurprize the guard which kept it; at which time their fellows, upon a ſignal given, were to come out of their houſes and murder all oppoſers; but when they were putting it in execution the unuſual crowing and fluttering of the cocks, about the place they attempted to enter at, diſcovered their deſign, upon which the Danes became ſo enraged that they doubled their cruelty, and uſed them with more ſeverity than ever; but being ſoon after freed from the Daniſh yoke, and to revenge themſelves on the cocks, for the misfortunes they involved them in, they inſtituted this cuſtom of knocking them on the head on Shrove-Tueſday, the day on which it happened. This ſport, though at firſt only practiſed in one city, in proceſs of time

time became a national divertiſement, and has continued ever ſince the Danes firſt loſt this iſland.

This race of animals is divided into a great number of varieties; they are common in moſt countries, and yet very few perfectly alike; thoſe of every different climate having their peculiarities, beſides the variations which take place among them in each. In Europe there may be ſaid to be three diſtinct ſpecies, though doubtleſs of the ſame ſtock; for what is commonly known as the *farm-yard*, or *dung-hill*, is widely different in ſize, colour, and manners, from the *game-cock*, and both are no leſs diſtant from the *bantam*; the latter ſpecies, being more uniform in their colours and characteriſtics, may deſerve deſcription. In common the bantam is little more than half the ſize of the game-cock, whom he ſomewhat reſembles in colour and ſpirit, for he will attack cats, dogs, or any other animal, totally indifferent as to their ſize; he has a reddiſh bill, red eyes, and a curious roſe comb on the top of his head; his ears are covered with a tuft of white feathers; his neck and back are cloathed with long ſtreaming feathers, intermixed with orange, black, and yellow; his breaſt

breaſt and lower part of the belly black; he has long ſtiff feathers growing from the thighs, which reach conſiderably below the knees; the legs are feathered as low as the toes, his tail is made up of ſtiff black feathers, with two large ones in the form of a ſickle hanging over the reſt. This breed was at firſt found domeſticated at Bantam in India, from which they received their name, and from whence they were tranſported into Europe. The hens of this ſpecies differ from the cocks, principally by varying in their colours, but which at all times are more brown and yellow, and leſs black, than his; they have alſo but a very ſmall red comb on the tops of their heads; their legs, like thoſe of the cock, are feathered down to the toes, and which is one of the chief marks by which the true breed is diſtinguiſhed.

The *Hamburgh cock* is a large ſtately fowl, appears very bold, and loſes none of the advantages in his march that Nature has given him; his bill is thick at the baſe, but ends in a ſharp point; the eyes are of a very beautiful yellow, encircled round with dark-coloured feathers, under which there is a tuft of black ones, which cover the ears; it has a ſort of roſe comb, which does not reach above

above half way on the head, the hinder part being covered with dark-coloured feathers, inclining to a black; the throat and gills are much the ſame, with long hackle-feathers of an orange and red mixture, black at the extremities, waving down the neck, and over ſome part of the back; the breaſt and belly are of a dark colour, ſpotted with round black ſpots; the thighs, and lower part of the belly, are of a ſhining velvet black, from which ſome have given him the name of *velvet breeches*.

The hindermoſt part of his neck, and the top of his back, are of a darkiſh red; the ſides of the wings more pale: the tail is made up of long feathers, of black, red, and orange colour, which, by the reflection of the ſun, yield a very beautiful luſtre. The legs and feet are lead-coloured, only the bottom part of them are yellow.

This is a peculiar breed, which is brought over from Hamburgh, and is much eſteemed by the curious.

The *wonderful Indian cock* is a very beautiful feathered fowl; the plumage of his whole body is ſaid to conſiſt of the following five different colours, viz. black, white, green, red, and blue; the back part of the head is adorned

with a ſort of fleſhy ſubſtance, of a pyramidical figure, which appears of a blood red colour to the eye, and looks ſcaly; the bill is thick and ſtrong, the breaſt mottled very beautifully with red and green, the wings are not very long. The tail is made up of twelve large flaming feathers, a little reſembling a peacock's, the comb upon the head is double, with a ſingle wattle hanging under the lower mandible an inch and half long; it is ſaid to be a wild fowl, but eaſily tamed; the beak and legs are yellow.

The *Indian cock*, deſcribed by Sir Hans Sloane, has a large, prominent bill, the end of the upper mandible of which is black, the reſt yellow, as is the circle in the eyes; the head is adorned with a curious tuft of ſhining black feathers. The neck-feathers are of a very beautiful ſhining green colour, the body-feathers are black and green, mixed, and the thighs are blue.

The *Muſcovian black game-hen* is a large bird, weighing nine or ten pounds, has a yellow bill, of near an inch and a half in length, if meaſured from the angles of the mouth to the tip of it, with a ſharp tongue, which lies in the cavity of the palate, laying exactly formed

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to contain it. The eyes are of a fine hazle colour, above which there appears a ſort of ſcarlet-coloured, naked ſkin, ſituate in the place of its eye-brows.

They are generally of a yelloviſh brown, in ſome parts inclining to a white, with large white ſpots on the ſcapular parts of the wings, and are marked, more or leſs, with black feathers on many parts of the body, with whitiſh-coloured tips; but the colour of them is ſaid to change pretty much as they advance in years, or as they inhabit in different climates; the legs are large and ſtrong, and feathered down near as low as the toes.

They are found frequently upon the Alps, in Germany, and in the mountainous parts of Muſcovy, &c.

THE TURKEY.

OF the *Meleagris*, or *Turkey*, there is but one known ſpecies: it is a large but unweildy bird; the anterior part of the head is ſtrangely

covered and ornamented with a pendulous, ſoft, fleſhy ſubſtance; as are alſo the ſides of the head and throat: the eyes are ſmall but bright and piercing; the bill convex, ſhort, and ſtrong; a long tuft of coarſe black hairs on the breaſt; the wings moderately long, but not at all formed for ſupporting ſo large a bulk in long flights; the legs of moderate length and very robuſt.

The plumage is dark, gloſſed with variable copper and green; the coverts of the wings and the quill-feathers barred with black and white. The tail conſiſts of two orders; the upper or ſhorter very elegant; the ground colour a bright bay, the middle feathers marked with numerous bars of ſhining black and green. The longer or lower order is of a ruſty white colour, mottled with black, and croſſed with numerous narrow-waved lines of the ſame colour, and near the end with a broad band.

Turkies, we are confidently aſſured by Mr. Pennant, are natives only of America, or the New World, and were of courſe unknown to the ancients. And in mentioning thoſe parts of the world where Turkies are unknown in a ſtate of nature, Europe has no ſhare in the queſtion,

queſtion, it being generally agreed that they are exotic in regard of that continent.

Neither are they found in any part of Aſia Minor, or the Aſiatic Turkey, notwithſtanding ignorance of their true origin firſt cauſed them to be named from that empire. In Syria they are only met with in their domeſticated ſtate; in Armenia and India they are little known, and they have been introduced into China from other countries. The hot climate of Africa barely ſuffers theſe birds to exiſt in that vaſt continent, except under the care of mankind. Few are found in Guinea, but in the hands of the Europeans; as from the great heats the Negroes decline breeding them. Nor are they to be met with either in Nubia or Egypt.

As there is ſufficient cauſe to believe that the turkey can not be a native of the Old World, ſome proof will be neceſſary of its being only a native of the New, and of the period in which it made its appearance in Europe.

In 1525 Oviedo drew up the ſummary of his "Hiſtory of the Indies," for the uſe of his maſter, Charles V. and therein gives the firſt preciſe deſcription of theſe birds. This learned man had viſited the Weſt-Indies and iſlands in perſon, and paid particular regard to

their

their natural hiſtory. It appears that in his days the turkey was an inhabitant as well of the greater iſlands as of the main land: he ſpeaks of them as peacocks, for being a bird new to him he adopts that name from their ſimilitude; "but, ſays he, the neck is bare of feathers, though covered with a ſkin, which they change, after their phantaſie, into divers colours; they have a horn, as it were, upon their fronts, and hairs on their breaſts." Under the name of peacock he alſo deſcribes the Curaſſao birds, the male of which is black, the female ferruginous.

Franciſco Fernandez, who was ſent to South America by Philip II. to whom he was phyſician, ſometime between the years 1555 and 1598, obſerved them in Mexico, and gives them the title of Gallus Indicus, and Gallus Pavo. The Indians, as well as the Spaniards, domeſticated theſe uſeful birds. He ſpeaks of the ſize by compariſon, ſaying that the wild were twice the magnitude of the tame, and that they were ſhot with arrows or guns.

In North America they were obſerved by the very firſt diſcoverers. When Rene deLaudonniere, under the patronage of Admiral Coligni, attempted to form a ſettlement near the

the place where Charleſtown now ſtands, he met with them on his firſt landing in 1564. From his time the witneſſes of their being natives of the Continent are innumerable. They have been ſeen in flocks of hundreds in all parts, from Louiſiana even to Canada; but at this time are extremely rare in a wild ſtate, except in the more diſtant parts, where they are ſtill found in abundance.

It was moſt likely from Mexico, or the province of Yucatan, now reckoned part of that kingdom, and where Dampier ſaw them frequently as well wild as tame, that they were firſt introduced into Europe; for it is certain that they had been imported into England ſo early as the year 1524, the 15th of Henry VIII.

We probably received them from Spain, with which country we had great intercourſe till about that time. They were bred moſt ſucceſsfully in England from that period; inſomuch that they grew common in every farm-yard, and became even a diſh in our rural feaſts by the year 1685; as we may certainly depend on the word of Tuſſer, in his account of the "Chriſtmas huſbandlie fare,"—

"Beefe,

" Beefe, mutton, and porke, ſhred pies of the beſt,
" Pig, veale, gooſe, and capon, and *turkie* well-dreſt;
" Cheeſe, apples, and nuts, jollie carols to heare,
" As then in the countrie is counted good cheare."

It was not, however, until a later period, that they were familiarized in France; for we are told, that the firſt eaten there appeared at the nuptial feaſt of Charles IX. in 1570—although the annual ſacrifice of theſe birds, in our days about Chriſtmas is become ſo very great.

Wild turkies preſerve a ſameneſs of colour; but the tame, as is uſual with domeſtic animals, vary. The black approaches neareſt to the original ſtock. A very beautiful kind was introduced into this country ſome years ago from Holland, of a ſnowy whiteneſs, finely contraſting with its red head, and had probably been bred from an accidental white pair.

The manners of theſe birds are as ſingular as their figure; their attitudes in the ſeaſon of courtſhip are very ſtriking; the males fling their heads and necks backward, briſtle up their feathers, drop their wings to the ground, ſtrut and pace moſt ridiculouſly, wheel round the females with their wings ruſtling along the earth, at the ſame time emitting a ſtrange

ſound

ſound through their noſtrils, not unlike the *g r u u r* of a great ſpinning wheel. If interrupted, they fly into a great rage, change their notes into a loud guttural gobble, and then return to dalliance. The tones of the females are plaintive and melancholy.

They are polygamus, one cock ſerving many hens, which lay in ſpring, and produce a great many eggs, to the number of eighteen or twenty, and perſiſt in laying for a great while but retire to ſome obſcure place to ſit; the cock, through rage at the loſs of his mate, being very apt to break the eggs. The females are of a mild, gentle diſpoſition, very affectionate to their young, and make great moan on the loſs of them. They ſit on their eggs with ſuch perſeverance, that if they are not taken away when addle, the hens will almoſt periſh with hunger before they will quit the neſt; and when the brood is produced, they give many inſtances of that maternal anxiety, obſerveable in the feathered race.

When the hen turkey appears at the head of her young, ſhe is ſometimes heard to ſend forth a very mournful cry, the cauſe and intention of which are unknown; but the brood immediately ſquat under buſhes, or whatever

preſents itſelf for their purpoſe, and entirely diſappear; or if they have not a ſufficient covering, they ſtretch themſelves on the ground, and lie as if they were dead, in which ſtate they continue perhaps a quarter of an hour or longer. In the mean time the mother directs her view upwards with fear and confuſion, and repeats the cry that laid her young proſtrate. Thoſe who obſerve the diſorder of the bird, and her anxious attention, endeavour to trace the cauſe; which is always a bird of prey, floating in the clouds, and whoſe diſtance withdraws him from our view, but who cannot eſcape the vigilance or penetration of the active mother; this occaſions her fears, and alarms the whole tribe. "I have ſeen, (ſays the Abbé de la Pluche) one of theſe creatures continue in this agitation, and her young in a manner rivetted to the ground for an hour ſucceſſively, while the bird whirled about, aſcended, or darted down over their heads. But if he at length diſappears, the mother changes her note, and utters another cry that revives all her brood; they run to her, flutter their wings, tender her their careſſes, and undoubtedly relate all the dangers to which they have been expoſed."

The

In the poultry-yard, theſe birds require much attention and particular food; but as they grow up, they become more hardy, and follow the mother to conſiderable diſtances, in purſuit of inſect food, particularly ants, which they prefer to any other. When grown up, turkies are very hardy birds, and feed themſelves with very little expence to the farmer. Young ones are with us accounted a dainty, but the fleſh of the wild turkey is ſaid to be ſuperior in goodneſs to the tame, although redder. The ſize of turkies, eſpecially of the wild ones, has been variouſly repreſented, ſome writers ſtate the latter to weigh ſixty pounds; though ſpeaking from their own knowledge, they never can prove their weight to be above forty: and thoſe gentlemen cannot be *nice* in their aſſertions; who make the Norfolk turkies to weigh thirty pounds.

Eggs of the wild ſort have been taken from the neſt, and hatched under tame ones; the young ones nevertheleſs prove wild, perch ſeparate, yet mix and breed together in the ſeaſon; and the Indians frequently uſe the breed thus produced as a ſort of decoy bird.

Turkies are very ſwift runners in the tame, as well as the wild ſtate, though they are but

indifferent fliers. They love to perch on trees, and gain the heights they wiſh by riſing from bough to bough. In a wild ſtate, they get to the very ſummit of the loftieſt trees, even ſo high as to be beyond the reach of the muſquet.

In a ſtate of nature they go in flocks even of five hundred; they feed in general near fields of nettles, in the ſeeds of which they greatly delight, or where there is plenty of any kind of grain; they alſo feed much on the ſmall red acorn, and grow ſo fat in March, that they cannot fly more than three or four hundred yards, and are ſoon run down by horſemen. In the unfrequented parts bordering on the Miſſiſſippi, they are ſo tame as even to be ſhot with a piſtol. They frequent the great ſwamps of their native country, and leave them at ſun-riſing to repair to the dry woods in ſearch of acorns and berries; but before ſun-ſet, they return to the ſwamps to rooſt. When diſturbed they do not take flight, but run out of ſight. It is uſual to chace them with dogs, when they will fly and perch on the next tree, where, it is ſaid, they ſit quite ſpent and fatigued, till their purſuers come and knock them down with a long pole one after another. They are ſo

ſtupid

ſtupid, or ſo inſenſible of danger, as not to fly on being ſhot at; and even the ſurvivors remain unmoved at the death of their companions.

Wild Turkies are now become very rare in the inhabited and cultivated parts of America; and are only found in numbers in the diſtant and moſt unfrequented ſpots: for the Indians never think of domeſticating animals that the woods furniſh them with in abundance: yet they make elegant cloathing of their feathers; which are more beautiful than thoſe of our domeſtic ones, being of a vivid grey, bordered at the edges with a bright gold colour, they twiſt the inner webs into a ſtrong double thread of hemp, or the inner bark of the mulberry-tree, and work it like matting; it appears very rich and gloſſy, and as fine as a ſilk ſhag, and they frequently weave it into cloaks. Of the tails they make fans; and the French of Louiſiana were wont to make umbrellas, by joining together three or four tails.

Turkies are certainly very ſtupid birds, and they are not leſs quarrelſome than cowardly. Without any weapon of defence, they often attack each other, and in flocks they will even attack the common cock, who will for a long time

time keep a number of them at bay, and rather ſuffers by the ſuperiority of their weight and bulk, than from the annoyance of their arms. Singly, they will fly from the moſt contemptible animal that dares to face them.

The paſſions of the male are very ſtrongly expreſſed by the change of colours in the fleſhy ſubſtance of the head and neck, which alters to red, white, blue, and yellowiſh, as they happen to be affected. Their antipathy to *red* is well known, and they ſeem to have a peculiar averſion againſt children. There is another way, ſays Goldſmith, of encreaſing the animoſity of theſe birds againſt each other, which is often practiced by boys when they have a mind for a battle; this is no more than to ſmear over the head of one of the turkies with dirt, and the reſt run to attack it with all the ſpeed of impotent animoſity; nay, two of them thus diſguiſed, will fight each other till they are almoſt ſuffocated with fatigue and anger.

THE PEACOCK.

IT is pretty generally admitted that the Peacock was originally a native of the East Indies, and that to this time they are found in a wild ſtate, in the iſlands of Java and Ceylon. It has long however been in a domeſtic ſtate, for according to record we find, ſo early as the days of Solomon, among the articles imported from the Eaſt, were apes and peacocks. Ælian relates, that they were brought into Greece from ſome barbarous country, and were held in ſuch high eſteem among them, that a male and female were valued at above thirty pounds of our money. We are told alſo that when Alexander was in India, he found them flying wild, in vaſt numbers, on the banks of the river Hyarotis, and was ſo ſtruck with their beauty, that he laid a ſevere fine and puniſhment on all who ſhould kill or diſturb them. The Greeks were

ſo

ſo much ſtruck with its beauty, when firſt brought among them, that it was ſhewn as a great curioſity, and a large price was paid for ſeeing of it; nay, it is poſitively aſſerted, that it excited ſo much curioſity, that many people came from Macedon to Athens, to behold what was then conſidered the moſt beautiful phenomenon in the feathered race.

There is every reaſon to ſuppoſe that the beauty of this bird firſt tempted man to tranſport him from his native climes into the Weſtern part of the world, and it is alſo probable that this ſame beauty, together with his ſcarcity, tempted the extravagant and voluptuous, to have him ſerved up at their feaſts. Auſidius Hurco ſtands charged by Pliny with being the firſt who fatted up the peacock for the tables of the luxurious. Hortenſius the orator was the firſt who ſerved them up at an entertainment at Rome; from that time they were conſidered as one of the greateſt ornaments of every feaſt, and have been mentioned by ſeveral authorities as the greateſt dainty the epicure could be ſupplied with. In later times, however, the fleſh of the peacock has loſt its reputation; whether this ariſes from a different mode of feeding or dreſſing them, or is merely another

another proof of the difference of taſte between the antients and moderns, we ſhall not preſume to determine, but certain it is that in this country the fleſh of the peacock is both coarſe and inſipid. Indeed it is not in England alone, that it has been ſo conſidered, for we are informed, that even in the times of Francis the Firſt, it was a cuſtom to ſerve up peacocks to the tables of the great, with an intention not to be eaten, but only to be ſeen. For this purpoſe it was the practice carefully to ſtrip off the ſkin, and then preparing the body with the warmeſt ſpices, cover it up again with all its plumage in full diſplay, taking care that it was no way injured by the preparation. The bird, thus prepared, was often preſerved for many years without corrupting; and it is aſſerted of the peacock's fleſh, that it keeps longer unputrified than that of any other animal. To give a higher zeſt to theſe entertainments, on weddings particularly, they filled the bird's beak and throat with cotton and camphire, which they ſet on fire to amuſe and delight the company.

From the ſplendor of its plumage it has been denominated by the poets of antiquity, the bird of Juno; and as far as brilliancy of ap-

pearance would go, it certainly has claim to ſo diſtinguiſhing an epithet. In general, the head, neck, and breaſt of the peacock, (*fig.* 13) is of a beautiful ſaphire colour; on the top of his head is a plume of greeniſh feathers, ſomewhat reſembling lily flowers, above and below his eyes are white oblong ſpots, his beak inclines to blue; his back, and upper part of his wings are of a light aſh, interſperſed with tranſverſe black ſpots; his tail is very long, the feathers of which frequently meaſure four feet, which he can, at pleaſure ſpread over his back, and being compoſed of a mixture of green, blue, and gold colour, ornamented with regular black ſpots, or eyes, it in thoſe caſes has a moſt ſplendid effect, eſpecially when diſplayed againſt the rays of the ſun. The female is much ſmaller than the male, and has neither the tail, nor variety of colours, to boaſt of; her head, wings, back, belly, hips, and thighs, being of a dark aſh-colour.

Theſe birds chiefly feed on corn, particularly barley, of which they are moſt fond; they will, however, ſeek after inſects with great eagerneſs, and if they can get into a garden do conſiderable

conſiderable damage, by deſtroying the moſt tender plants, and nipping the buds of the choiceſt flowers. They begin to breed about February, and continue to do ſo till the latter end of April. The peacock, at thoſe ſeaſons, poſſeſſes immoderate deſires, and one is perfectly ſufficient to accompany five females, and if there be not a ſufficient number he will even purſue the ſitting hen; for which reaſon the peahen endeavours, as much as poſſible, to conceal her neſt from him, becauſe he would not only diſturb her ſitting but break her eggs: ſhe ſeldom lays above five or ſix eggs in this climate before ſhe ſits. Ariſtotle deſcribes the peahen as laying twelve; and probably in her native climate ſhe may be thus prolific; for it is certain, that in the foreſts, where they live in freedom, they are aſtoniſhingly numerous. The peacock lives about twenty years, but it is not till his third year that his tail is adorned with the beautiful variegated plumage.

"In the kingdom of Cambaya," ſays Tavernier, "near the city of Baroch, whole flocks of them are ſeen in the fields. They are very ſhy, however, and it is impoſſible to come near them. They run off ſwifter than the partridge, and hide themſelves in thickets, where it is im-

poſſible to find them. They perch by night upon trees; and the fowler often approaches them at that ſeaſon with a kind of banner, on which a peacock is painted to the life, on either ſide. A lighted torch is fixed on the top of his decoy; and the peacock, when diſturbed, flies to what it takes for another, and is thus caught in a nooſe prepared for that purpoſe."

There are varieties of this bird, ſome of which, in the eaſtern parts of Africa, are perfectly white; but thoſe will not live in the temperate climates of Europe.

The *peacock of Thibet* is the moſt beautiful of the feathered creation, containing, in its plumage, all the moſt vivid colours, red, blue, yellow, and green, diſpoſed in an almoſt artificial order, as if merely to pleaſe the eye of the beholder.

The *Japan peacock* is a curious Eaſt-India Bird, and ſo much valued by the Indians in ſome parts that it is reckoned a crime worthy of death to kill one of them: the beak is long and thin, the top of the head flat and green, the upper part of the neck is likewiſe green, intermixed with little blue ſpots, which are alſo diverſified by very ſmall white lines, deſcending from the middle of them. It has a curious

curious tuft on the top of the head, almoſt four fingers long, partly green, partly blue, and not unlike an ear of wheat, or rather rye. The pupil of the eye black, the circle between the white and the pupil yellowiſh; the whole encompaſſed with a red circle; the back and breaſt is covered with curious party-coloured feathers, reſembling ſcales of fiſh, of ſky-blue and green, and green and gold colour, ſurpriſingly intermixed; the wings are pretty near the colour of the back; the ends of the feathers quite black. The colours appear in ranges on the wings croſs-ways, firſt green, then blue, then black, &c. The belly, hips, and feet, are of a ruſſet colour, marked with black ſpots. On the belly likewiſe are a few white ſtreaks, or croſs lines, the tail feathers (as in ours) are very curious; the ground colour of them is cheſnut; the figures upon them reſembles ours, with this difference only, they are ſomewhat longer: the firſt colour in the figures is gold. the next ſky-blue, the laſt green, as in ours, The hen is pretty near like the cock, but leſs, and wants the curious colours with which he is adorned, in her tail. Her head, neck, breaſt, back, and wings, are like his. But what is remarkable, the hen has upon her rump the

ſame

ſame figures that ſo agreeably beautify the cock's tail: her tail is green, with ſome little mixture of blue: the hen likewiſe differs from the cock in her belly being quite black.

THE GROUS, AND ITS AFFINITIES.

BESIDES the Cock of the Wood, the Black Cock, the Grous, and the Ptarmigan, there are at leaſt fifteen ſpecies which belong to this genus, and the whole of them are diſtinguiſhable from every other of the poultry kind, by having a naked ſkin of a ſcarlet colour, above each eye. It appears from tradition, that formerly they were very common in England, and which, in reality, might have been the caſe, when a great part of the country was covered with heath, which is their natural retreat, but ſince cultivation has ſo much encreaſed, they are ſcarcely to be found in any other places, but the extenſive waſtes and moors

of

FIG. 15.
Cock of the Wood.

FIG. 16.
Black Cock.

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of Weſtmoreland, and the north of Great Britain; indeed the two firſt are unknown in the ſouth, having taken refuge in the northern parts of Scotland, where they find ſhelter and ſecurity in the extenſive heaths and foreſts.

The cock of the wood is almoſt the ſize of a turkey, and often weighs near fourteen pounds; but the female is much ſmaller. The head and neck are aſh-colour, croſſed with black lines; the body and wings cheſnut brown, and the breaſt of a very gloſſy blackiſh green. The legs are ſtrong, and covered with brown feathers. The plumage of the female differs from this deſcription, in being red about the throat, and having the head, neck, and back croſſed with red and black bars; the belly barred with orange and black, with the tips of the feathers white, as are alſo the tips of the ſhoulders; indeed, ſhe is altogether ſo very different, that ſhe might be ſuppoſed to belong to another ſpecies.

The cock of the wood, as we have already obſerved, is chiefly fond of a mountainous, or woody ſituation. In winter he reſides in the deepeſt receſſes of the woods, and in ſummer he ventures down from his ſecluſion, to make ſhort depredations on the farmer's corn; but in

theſe

theſe excurſions he ſeems to be perfectly aware of his danger, and is conſtantly upon his guard; ſo much ſo, indeed, that it is then very difficult to come near him by ſurpriſe, and very few are taken but by thoſe who in autumn purſue him into his natural retreats, and which is often done from his fleſh being conſidered as very delicate food.

When in the foreſt, he attaches himſelf principally to the oak and the pine-tree; the cones of the latter ſerving for his food, and the thick boughs for an habitation; and he ſometimes will ſtrip one tree bare before he attempts the cones of another. He feeds alſo upon ants' eggs, which ſeem a high delicacy to all birds of the poultry kind; cranberries are likewiſe often found in his crop; and his gizzard, like that of domeſtic fowls, contains a quantity of gravel, for the purpoſe of aſſiſting his powers of digeſtion.

This bird begins to feel the genial influence of the ſpring at its firſt approach, and his ſeaſon of love may be ſaid to continue from that time until the trees have all their leaves, and the foreſt is in full bloom. During this whole ſeaſon the cock of the wood may be ſeen

to

at ſun-riſe and ſetting, extremely active upon one of the largeſt branches of the pine-tree. With his tail raiſed and expanded like a fan, and the wings drooping, he walks backward and forward, his neck ſtretched out, his head ſwollen and red, and making a thouſand ridiculous poſtures: his cry, upon that occaſion, is a kind of loud exploſion, which is inſtantly followed by a noiſe like the whetting of a ſcythe, which ceaſes and commences alternately for about an hour, and is then terminated by the ſame exploſion. During the time he continues this ſingular cry he ſeems entirely deaf, and inſenſible of every danger: whatever noiſe may be made near him, or even though fired at, he ſtill unconcernedly continues his call. Upon all other occaſions he is the moſt timorous and watchful bird in nature; but then he ſeems entirely abſorbed by his inſtincts, and ſeldom leaves the place where he firſt begins to expreſs the exceſſes of deſire. This extraordinary cry, which he accompanies by a clapping of the wings, is no ſooner finiſhed than the female, who hears it, replies, approaches, and places herſelf under the tree, from whence the cock deſcends to her. The number that, on this occaſion, reſort to his

call, is uncertain; but one male generally ſuffices for all the females in one part of the foreſt. The female ſeldom lays more than ſix or ſeven eggs, which are white, and marked with yellow, of the ſize of a common hen's egg: ſhe generally lays them in a dry place, and a moſſy ground, and hatches them without the company of the cock. When ſhe is obliged, during the time of incubation, to leave her eggs in queſt of food, ſhe covers them up ſo artfully with moſs, or dry leaves, that it is extremely difficult to diſcover them; and when ſitting, though wild and timorous at other times, ſhe will ſuffer the ſportſmen to approach and drag her off her neſt. She often keeps to her neſt though ſtrangers attempt to drag her away.

As ſoon as the young ones are hatched they run with extreme agility after the mother, ſometimes even before they are entirely diſengaged from the ſhell. The hen leads them forward to procure ants' eggs, and the wild mountain-berries, which, while young, are their only food. As they grow older they feed upon the tops of heath, and the cones of the pine-tree. In this manner they ſoon come to perfection: they are an hardy bird, their food lies every where before them, and it would ſeem

that

that they ſhould increaſe in great abundance; but this is not the caſe; their numbers are thinned by rapacious birds and beaſts of every kind, and ſtill more by their own ſalacious conteſts.

The whole brood follows the mother for about two months, at the end of which the young males entirely forſake her, and keep in great harmony together till the beginning of ſpring, when they bid adieu to all their former friendſhips. They begin to conſider each other as rivals; and the rage of concupiſcence quite extinguiſhes the ſpirit of ſociety. They fight each other like game-cocks, and are ſo inattentive to their own ſafety that it often happens that two or three of them are killed at a ſhot. It is probable that in theſe conteſts the bird which comes off victorious takes poſſeſſion of the female ſeraglio, as it is certain they have no faithful attachments.

The *black grous* is a much more common ſpecies than the former: it is found in many parts of Europe, and in moſt of the moors in the North of England. Its name almoſt furniſhes its deſcription, ſince the whole body is black; but it has another remarkable characteriſtic, which is, that its tail is forked. It

is rather larger than a common fowl. The cocks are ſo violent againſt each other, and their conteſts ſo furious, that in Courland, Livonia, &c. it is a common method of taking them, to aſſemble them together, by imitating the crowing of a black cock, and by having a figure prepared to imitate that animal in all its motions. The grous being collected in vaſt numbers from all parts, enter at firſt into a kind of ſportive combat, which preſently terminates in a real and bloody conteſt, when the combatants are ſo intent upon each other's deſtruction that they fall an eaſy prey to their purſuers, and may even be knocked down with a ſtick. Of this ſpecies there are ſeveral varieties.

The *red grous*, or *moor-cock*, is alſo tolerably plentiful in thoſe parts where the *black grous* is to be found, and is rather ſmaller than the preceding ſpecies. The throat and back are reddiſh, with a black ſpot in each feather. The breaſt and belly are purpliſh brown, and the legs are covered with ſoft whitiſh feathers; they are extremely ſlow in taking wing, and in general run along the ground till they come to a ſmall hillock before they attempt it.

The

The *hazel grous* is a ſmaller bird, and appears of the ſame ſpecies with the red grous. It is a native of Germany.

The *pin-tailed grous*, ſo called from its narrow-forked tail, is alſo of the ſame ſpecies with our *red* grous. It is the ſize of a partridge, and is found in France, Spain, Barbary, &c.

The *ptarmigan grous* is in length about fifteen inches. The bill is black, and the plumage is a pale aſh colour, elegantly mottled with duſky ſpots. It is found in all the northern parts of Europe, and in the Highlands of Scotland, Orkneys, &c.

The other birds of this genus have all the ſame manners as the preceding, and only differ ſome little in the plumage. There is a ſpecies in North America which is called the *ruffed grous*, and which is diſtinguiſhed by a large ruff on the hind part of the neck, to be raiſed or depreſſed at pleaſure; it alſo has the head adorned with a creſt.

THE PINTADA, OR GUINEA-HEN.

THE Pintada has been conſidered by ſome authors as the ſpecies which unites the characteriſtics of the pheaſant and the turkey. It is about the ſize of a common hen, but from having longer legs it has the appearance of being much larger. It has a round back, with a tail turned downwards, like a partridge. The head is covered with a kind of caſque; and the whole plumage is black or dark grey, ſpeckled with regular and uniform white ſpots. It has wattles under the bill, which do not proceed from the lower chap, as in cocks, but from the upper, which gives it a very peculiar air, while its reſtleſs gait, and odd chuckling ſound, diſtinguiſh it ſufficiently from all other birds whatever. Theſe Pintadas are ſaid to perch upon trees in Guinea, and to ſpend more of their time on them than on the ground; and in the Hiſtory of the Buccaniers of America there is an account of a bird which the natives call

call the wood-pullet, but the Spaniards the pintada, which build in the holes of the palmiſt-tree.

This race are undoubtedly natives of Africa, but they have been generally diffuſed over both the old and new continent, and almoſt every kingdom has given them a different appellation, commonly however adding that of Guinea fowl. It is by no means uncommon to ſee large flocks of them together, in their native country, traverſing about with their young in ſearch of food. Their habits are perfectly ſimilar with common fowls, and they ſeem to have no other difference than that the males and females are ſo nearly alike that it is difficult to diſtinguiſh one from the other.

Of this ſpecies there are many varieties, but the moſt different is that deſcribed by Barbot, which he ſays he ſaw in vaſt numbers in South Guinea; theſe, according to that author, have long ſlender necks, their bills are brown at the points, and the upper parts red; their heads are a deep brown, with an horny ſubſtance at the top, on each ſide is a fleſhy prominence of a pale blue, and the back part is of a reddiſh brown; their bodies are of a dark aſh colour, pretty much chequered with white ſpots, their breaſts

breaſts of a pale aſh, and their legs of a duſky fleſh colour. He relates a remarkable inſtance of the ſuperſtition of the natives of that country with reſpect to this fowl. He ſays it is the cuſtom there, when any of the princes, eſpecially in Folgia, have concluded an alliance with any neighbouring potentate, as well as among private perſons, to cauſe ſome pullets of this kind to be dreſſed, and eat them together, after each treating party has been marked with ſome drops of the blood of the animals (which by them is conſidered ſacred); they alſo carefully preſerve the bones of them, becauſe if one of the parties ſhews an inclination to break the treaty, thoſe bones are produced for him to ſhew cauſe for the breach thereof.

FIG. 19.

Gold Pheasant

FIG. 20.

Silver D°

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THE PHEASANT.

THE Pheaſant is admitted almoſt without diſpute to be a native of the Old Continent, and ancient authors have ſuppoſed it to have been originally found on the banks of the Phaſis, a river of Colchis, in Aſia Minor, from which its name alſo appears to be derived. However that be, the ſpecies has long been ſpread over the greateſt part of the known world, and for many ages has been held in high eſtimation, both on account of the ſavourineſs of its fleſh, and brilliancy of its plumage. In the latter reſpect it is among thoſe birds that leave the efforts of the artiſt at a diſtance; he may indeed delineate a perfect reſemblance of its form, and give an idea of its colours, but the vivid ſhades of its natural brilliancy far outvie the powers of art. It is recorded that when Crœſus, king of Lydia, was ſeated on his throne, adorned with royal magnificence, and all the blazing pomp of Eaſtern ſplendor, he

aſked Solon if he had ever beheld any thing ſo fine! The Greek philoſopher, no way moved by the objects before him, or taking a pride in his native ſimplicity, replied, he had ſeen the beatiful plumage of the pheaſant, and therefore could be aſtoniſhed at no other finery; and we perfectly agree with that great philoſopher, that nothing can exceed the variety and richneſs of colours of this beautiful creature. The iris of the eyes is yellow, and the eyes themſelves are ſurrounded with a ſcarlet colour, ſprinkled with ſmall ſpecks of black. On the fore-part of the head there are blackiſh feathers mixed with a ſhining cheſnut. The top of the head, and the upper part of the neck, are like ſilk, and are ſhaded with blue, green, and gold colours, and they are ſo curiouſly intermixed as to ſometimes appear blue and ſometimes green, according as they happen to be differently placed to the eye of the ſpectator. The feathers of the breaſt, the ſhoulders, the middle of the back, and the ſides under the wings have a blackiſh ground, with edges tinged of an exquiſite colour, which appears ſometimes black and ſometimes purple, according to the different lights it is placed in; under the purple there is a tranſverſe ſtreak of gold colour.

colour. The tail, from the middle feather, to the root, is about eighteen inches long; the legs, the feet, and the toes, are of the colour of horn. There are black ſpurs on the legs, ſhorter than thoſe of a cock; and a membrane that connects two of the toes together. The male is much more beautiful than the female, who is generally of a light brown, intermixed with black.

The fleſh of this bird has been long conſidered as one of the greateſt dainties; and when the old phyſicians ſpake of the wholeſomeneſs of any viands, they made their compariſon with the fleſh of the pheaſant. Theſe perfections were doubtleſs ſufficient temptations for man to endeavour to render it domeſtic, but in vain has he employed his ingenuity for that purpoſe, for however it has been bred, or in whatever manner it has been inſtructed, no ſooner has it obtained its liberty, than diſdaining the protection of man, it has left him to take ſhelter in the thickeſt woods and remoteſt foreſts. Almoſt all others of this kind, as the cock, the turkey, or the pintada, when once reclaimed, continue in their domeſtic ſtate, and preſerve the habits and appetites of willing ſlavery; but the pheaſant, though taken from its native warm

retreats, where the woods ſupply variety of food, and the warm ſun ſuits its tender conſtitution, and brought into our climates, ſtill continues its attachment to native freedom; and prefers a ſcanty ſupply of acorns and berries, in our parks and woods, to the care and attention that would be paid him in a domeſtic ſtate: and even when kept in captivity, upon all occaſions he ſhews his ſpirit of independency.

When at liberty in the woods, the hen pheaſant lays from eighteen to twenty eggs in a ſeaſon, but when kept in confinement ſhe ſeldom lays above ten. In the ſame manner, when at liberty, ſhe hatches and trains up her brood with patience, vigilance, and courage; but if kept in confinement, ſhe can ſcarce ever be brought to ſit with ſufficient attention; ſo that a common hen is generally her ſubſtitute upon ſuch occaſions; and even when ſhe does hatch them, ſo far from attending and teaching them to ſeek their food, the young birds would ſtarve, if left ſolely to her protection. The pheaſant, therefore, on every account, ſhould be left to range at large in the woods, for its fecundity when wild is ſufficient to ſtock the foreſt; its beautiful plumage

mage adorns it; and its fleſh retains a higher flavour from unlimited freedom.

Pheaſants, like all others of the poultry kind, have no great ſagacity, and ſuffer themſelves eaſily to be taken. At night they rooſt upon the higheſt trees of the wood; and by day they come down into the lower brakes and buſhes, where their food is chiefly found. They generally make a kind of flapping noiſe when they are with the females; and this ſerves to apprize the ſportſman of their retreats. At other times they are traced in the ſnow, and frequently taken in ſpringes. But of all birds they are ſhot moſt eaſily, as they always make a whirring noiſe when they riſe, by which they give notice of their exact ſituation, and being a large mark, and flying very ſlow, they ſcarcely ever eſcape.

It is no very uncommon practice to procure the eggs of the pheaſant, and put them under a common hen, in which caſe the young become as familiar as chickens; and when they are kept for breeding, it is neceſſary to put five hens with one cock. In her natural ſtate the female makes her neſt of dry graſs and leaves; the ſame muſt, therefore, be laid for her where they are kept, and ſhe will herſelf, ſometimes, properly

perly diſpoſe them. The young ones are very difficult to be reared; and they muſt be ſupplied with ants-eggs, which is the food the old one leads them to gather when wild in the woods. Theſe, however, may be chopped up with curds or meat, but they muſt be fed with great exactneſs, both as to the quantity and the time of their ſupply. It is alſo requiſite that their food ſhould ſometimes be varied, and then they may be ſupplied with wood lice, earwigs, and other inſects. The place where they are reared muſt be kept extremely clean; their water muſt be changed twice or thrice a day; they muſt not be ſuffered to go upon the graſs before the dew is off the ground in the morning, and they ſhould always be taken in before ſun-ſet. When they become adult, they may be fed with any kind of grain, but oats and barley are their favourites.

Longolius recommends the following ſimple method for encreaſing the breed. "The pheaſant is a very bold bird when firſt brought into the yard among other poultry, and will ſpare neither cocks nor hens it can maſter; but after a time it will live tamely among them, and at laſt be brought to couple with the common hen. The breed thus produced take much ſtronger after the pheaſant

pheaſant than the hen; and if the females were again ſupplied with a cock-pheaſant, for the breed is not barren, the next race would advance ſtill nearer, and ſo on, till at laſt there would be little difference between them and the original ſtock of the male; and yet ſuch thus produced would have the advantage of being more tame than they can be rendered by any other mode." The former part, however, is almoſt unneceſſary, as the cock pheaſants frequently, in the ſpring, come into the farm-yards early in the morning for the purpoſe of courting the hens, and will not moleſt any but ſuch of the cocks as ſhall ſhew an inclination to interrupt their pleaſures.

The pheaſant when full grown, ſeems to feed indifferently upon every thing that offers. A French writer aſſerts, that one of the king's ſportſmen ſhooting at a parcel of crows, that were gathered round a dead carcaſs, to his great ſurpriſe, upon coming up, found that he had killed as many pheaſants as crows. It is even aſſerted by ſome, that ſuch is the carnivorous diſpoſition of this bird, that when ſeveral of them are put together in the ſame yard, if one happens to fall ſick, or ſeems to be pining, that all the reſt will fall upon, kill, and devour it.

it. But of the veracity of this aſſertion we have our doubts, never having met with a ſingle obſerver of the manners of theſe animals, who conſidered it as a fact.

Of the pheaſant tribe there are ſeveral varieties, but they all preſerve a ſuperiority in the beauty of their plumage. Some of them are ſpotted all over with a wonderful degree of brilliancy, and are called *peacock pheaſants*, while others are ornamented with a beautiful creſt. The moſt remarkable, however, are

The *golden pheaſant*, which is principally found in China, and is about the ſize of the Engliſh pheaſant. The bill of this is of a light brown, the iris of the eyes yellow; the feathers on the upper part of the head of the ſame colour, with a curious long creſt of ſcarlet feathers hanging down on the back part of the neck, beautifully variegated with black circular lines, which reach down a conſiderable way on the back, and which it has the power of erecting at pleaſure; the reſt of the back is of a reddiſh yellow, the ſcapular feathers of the wings, the fore-part of the breaſt, neck, and belly, are of a fine ſcarlet. The upper covert feathers are of a darkiſh blue, ſhaded with a gold colour: the firſt feathers of the other

other rows are of a dark yellow ſpotted with brown; the longeſt tail feathers are of a deepiſh red tipped with a fine yellow; and the legs and feet are of the ſame colour.

The *ſilver pheaſant* is alſo about the ſize of the former, and belongs to the Eaſtern climates: its bill is of a duſky yellow, from the baſe of which along the upper part of the head is a line of long black feathers; the eyes are encircled with a ſmall row of white feathers, ſurrounded with a larger circle of ſcarlet, ſpeckled with deep red, which reaches from the bill to the hind part of the head, and are conſiderably broader than the red in the Engliſh cock pheaſant; the back, neck, and wings, are white, interſperſed with a few dark ſhades; the breaſt, and under part of the belly, is nearly black, beginning at the baſe of the under mandible, ſpreading itſelf broader on the ſides of the belly, and decreaſing into a point under the tail; the thighs are dark, the feet a fine ſcarlet, and the claws black.

The whole of this race have the ſame habits and cuſtoms as thoſe we have already deſcribed, and their chief, if not only difference, conſiſts of the variation in the colour of their plumage.

THE PARTRIDGE.

PARTRIDGES are pretty generally known in all parts of the inhabited globe, and like all others, eſpecially of the poultry kind, ſo univerſally diffuſed, include ſeveral varieties, though this race is not, in that reſpect, ſo conſpicuous as many of thoſe we have already treated of.

The common Partridge has a remarkable plump body, and weighs about fourteen or fifteen ounces: on the ſides of the head, and under the bill, it is a deep ſaffron colour. The cock has on his breaſt a red mark, nearly of the ſhape of an horſe-ſhoe, down to which the feathers are of a bluiſh aſh, varied with black tranſverſe lines. The back and wings are party-coloured, red, aſh, and black. The hen is rather leſs than the cock, and has much leſs red under her throat.

"Theſe birds," ſays Willoughby, "hold the principal place in the feaſts and entertainments of princes, without which their feaſts are

Male & Female Partridges.

Male & Female Quails.

are eſteemed ignoble, vulgar, and of no account. The Frenchmen do ſo highly value, and are ſo fond of the partridge, that if they be wanting, they utterly ſlight and deſpiſe the beſt ſpread tables, as if there could be no feaſt without them." But, however this might be in the times of our hiſtorian, the partridge is now too common in France to be conſidered as a peculiar rarity. In England, however, where they are not ſo plenty, they are ſtill a favourite delicacy at the tables of the rich; and the deſire of keeping it to themſelves has induced them to make laws for its preſervation, no ways congenial with the general ſpirit of Engliſh legiſlation: And the ſentiments of a well-known author upon this ſubject are in ſuch exact uniſon with right, reaſon, and juſtice, that they deſerve to be univerſally recorded. "What (ſays he) can be more arbitrary than to talk of preſerving the game, which, when defined, means nothing more than that the poor ſhall abſtain from what the rich have taken a fancy to keep for themſelves? If theſe birds could, like a cock or a hen, be made legal property, by being taught to keep within certain diſtricts, and only feed on thoſe grounds

that belong to the man whoſe entertainments they improve, it then might, with ſome ſhew of juſtice, be admitted, that as he fed ſo he might claim them. But the contrary is the caſe, nor will the vanity of man induce him to attempt laying a reſtraint upon the liberty of thoſe birds, which, when let looſe, put no limits to their excurſions. They feed every where; upon every man's ground; they are nouriſhed by all, conſequently belong to all; and therefore it is impoſſible to trace upon what reaſonable ground any one man, or ſet of men, can lay claim to them while ſtill continuing in a ſtate of nature.

"I never walked out about the environs of Paris that I did not conſider the immenſe quantity of game that was running almoſt tame on every ſide of me, as a badge of the ſlavery of the people; and what ſome of my friends wiſhed me to obſerve as an object of triumph, I always regarded with a kind of ſecret compaſſion; yet this people have no game-laws for the remoter parts of their kingdom; the game is only preſerved in a few places for the king, and is free in moſt of the open parts of the country. In England the prohibition is general;

general; and the peaſant has not a right to what even ſlaves, as he is taught to call them, are found to poſſeſs."

There are two diſtinct ſpecies of partridges familiar in theſe climates, the one being of a red ſhade throughout his feathers, and much larger than that which, from its being ſo numerous, is called the common partridge; the latter are found in moſt countries in Europe; they feed on ſnails, ants, ant-eggs, grain and leaves; they generally lay from twelve to eighteen eggs, the moſt of which they hatch, and are particularly attentive to their young, inſomuch, that whenever a dog, or any other animal, approaches their neſt, the females act with the greateſt ſubtlety; quitting her young ſhe will juſt riſe above the head of her enemy, and, pretending to be unable to fly, fall down at a little diſtance before him; this ſhe will repeat until ſhe has drawn him to a conſiderable diſtance from her offspring, and then taking wing ſhe returns to them, leaving him the dupe of his credulity. She does not, however, fly to the ſpot where ſhe left them, but drops at ſome diſtance, and calls them to her, which they immediately obey, and follow wherever ſhe leads their courſe. Through the winter the

the young keep conſtantly with their mother, and fly in covies, but on the appearance of ſpring they ſeparate into pairs, and upon this occaſion they fight very deſperately; moſt probably for the choice of a favorite mate. The males are exceedingly ſalacious, more ſo, it has been aſſerted, than any other bird; it is certain that he will purſue the female to her neſt, and it is even affirmed, that whenever he finds any of her eggs he will break them, that the care of hatching them may not deprive him of her ſociety. While on the other hand, naturaliſts have inſiſted that the female is ſo attached to the office of incubation, that if, by chance, ſhe loſes any of her own eggs ſhe will ſteal thoſe belonging to another, convey them to her neſt, and ſit upon them as her own; nor have they left this almoſt incredible ſtory here, but perſiſt that the circumſtance may always be known, by the young ones, thus hatched, refuſing to follow their quondam mother, and deſerting her and the other part of the brood as ſoon as they are able.

M. Thevenot mentions theſe partridges as being very numerous in the Levant, where he ſays they keep them tame like turtles, and have keepers who drive them out in the morning

and

and whiſtle them in at night, which they always obey.

Of this ſpecies there are alſo many varieties; the moſt particular of which are, the *American* or *Weſt-India partridge*; this is a much larger in ſize than the Engliſh one, the bill being thicker and ſtronger bears ſome reſemblance to that of a hawk. The colour, both of the bill and legs, together with a circle round the eye, are of a light brown, or reddiſh colour. The whole plumage of the body is ſomething darker than the common partridge; and in ſome parts of America they are ſo much inclined to a dark grey, or ſhining black, that ſome travellers have deſcribed them as *black partridges*.

Lahonton, in his voyage to North America, ſays they have a ſort of white partridges, about the ſize of ours, which he deſcribes as the moſt ſtupid animal in the world, and ſays it ſits upon the ſnow, and ſuffers itſelf to be knocked on the head with a pole without offering to ſtir.

The *hare-footed partridge*. There are two kinds of this bird. The firſt is about the bigneſs of a dove, and of ſuch an exquiſite and ſnow-ſurpaſſing whiteneſs that it diſcovers itſelf

and

and is often taken by that means; but the feet and bill are black, and the fine ſkin of the eye-lid is red, eſpecially in the male. The neck is diverſified here and there with black ſpots; and the bottom part, or roots, of the feathers are blackiſh.

The other is about the ſize of a quail, and of a yellowiſh hue; but on the back and neck almoſt of the colour of a woodcock. The wings near the body have white, duſky, and ſandy coloured feathers intermingled; but thoſe of the pinions are of an aſh colour. The belly, and inſide of the wings, are white; and they are never without a ring on the breaſt, of a red, yellow, and ſandy colour intermixed.

It takes its name of *lagopus*, or *hare-footed*, from the reſemblance its foot has to that of a hare.

In fact the partridge ſeems to be well known all over the world; it is found in every country, and in every climate, as well in the frozen regions about the pole as the torrid climes under the equator. It even ſeems to adapt itſelf to the nature of the climate where it reſides. In Greenland, the partridge, which is brown in ſummer, as ſoon as the icy winter ſets in, begins to take a covering ſuited to the ſeaſon; it is then

then clothed with a warm down beneath; and its outward plumage aſſumes the colour of the ſnow, amongſt which it ſeeks its food. Thus it is doubly fitted for the place, by the warmth and the colour of its plumage; the one to defend it from the cold, the other to prevent its being noticed by the enemy. Thoſe of Barakonda, on the other hand, are longer legged, much ſwifter of foot, and chuſe the higheſt rocks and precipices to reſide in. They are alſo found in the Alps and Pyrennean mountains, where they are ſo fond of froſt and ſnow, that as ſoon as the former begins to melt in the lower part of the mountains, they remove higher, to places where the ſun has leſs power, and the cold is more intenſe.

THE QUAIL.

THE QUAIL is not above half the ſize of a partridge, whom it very much reſembles in ſhape and manners. The feathers of the head are black, edged with ruſty brown; the breaſt is of a pale yellowiſh red, ſpotted with black; the feathers on the back are marked with lines of a pale yellow, and the legs are of a pale hue.

The quail is certainly a bird of paſſage; and yet when we conſider its heavy manner of flying, and its dearth of plumage, with reſpect to its corpulence, it appears ſurpriſing how a bird ſo apparently ill qualified for migration, ſhould take ſuch extenſive journeys; yet nothing however is more certain: "When we ſailed from Rhodes to Alexandria, (ſays Bellonius,) about autumn, many quails, flying from the north to the ſouth, were taken in our ſhip; and ſailing at ſpring-time the contrary way, from the ſouth to the north, I obſerved them on their return, when many of them were taken in the ſame manner." This account is confirmed by many others; who aver, that they chuſe a north wind for theſe adventures; the ſouth wind being very unfavourable, as it retards their flight, by moiſtening their plumage. They then fly two by two; continuing, when their way lies over land, to go faſter by night than by day; and to fly very high, to avoid being ſurpriſed or ſet upon by birds of prey. It has however become a doubt whether quails take ſuch long journies as Bellonius has made them perform; and ſeveral authors have aſſerted that they only migrate from one province of a country to another. For inſtance, that in England.

land, at the cloſe of autumn, they fly from the inland counties, to thoſe bordering on the ſea, and continue there all the winter: and alſo that they quit the ſtubble fields and marſhes on the appearance of froſt and ſnow, and retreat to the ſea ſide, where they ſhelter themſelves among the weeds, and live upon what is thrown up thereon from the ſea, particularly in Eſſex; and the time of their appearance upon the coaſts of that county exactly coincides with their diſappearance from the more internal parts of the kingdom; from which the concluſion has been drawn as certain, that they do not migrate acroſs the ſea; but clearly upon a very ſlight foundation, as their aſſembling at thoſe particular periods on the ſea-coaſt, may equally as well be ſuppoſed for the purpoſe of taking flight as to conceal themſelves among the reeds.

The quail is much leſs prolific than the partridge; it ſeldom lays more than ſix or ſeven whitiſh eggs, which are marked with ragged, ruſt-coloured ſpots. But their ardour in courtſhip, ſays a modern author, ſcarcely yields to any other bird, as they are fierce and cruel at that ſeaſon to each other, fighting moſt deſperately, and, during which rencounters, they

will frequently ſuffer themſelves to be taken. Quail-fighting was a favourite amuſement among the Athenians; they abſtained from its fleſh, from an idea that it was unwholeſome, as ſuppoſing that it fed upon the white hellebore; but they reared great numbers of them for the pleaſure of ſeeing them fight; and they were as regularly trained for the conteſt as game cocks are in the preſent day.

Theſe birds are very eaſily taken by artifice; they have a very peculiar call, and which the fowler finds very eaſy to imitate; being ſo prepared, he goes out very early in the morning and having ſpread his net in a convenient place he imitates the call of the female, with what is called a quail-pipe; this is no ſooner heard by the male, than he flies eagerly to the ſpot, and being entirely taken up with the thoughts of the female, he careleſsly goes into the net, and as the moraliſt obſerves, becomes a victim to his paſſions.

Magpye.

Crow.

OF THE PIE KIND.

WITHOUT pretending to give a regular arrangement to this moſt numerous part of the animal creation, or attempting to claſs birds which philoſophy may preſume to be poſſible, but whoſe diſtinctions, reaſon ſeems to tell us is beyond the comprehenſion of man, we ſhall, nevertheleſs, ſo far follow precedent, as to keep them in ſome degree of order; and upon this principle it is that we now proceed to a genus, which, though in ſome things are ſimilar to all the foregoing, yet their differences are ſo great, that they cannot be ſaid to juſtly belong to either.

To ſpeak of this race in general terms, we cannot be more explicit than in quoting the words of a modern author, who ſays, "under "this (the pie) claſs of birds, we might place "all that noiſy, reſtleſs, chattering, teizing "tribe

" tribe that lies between the hen and the thruſh;
" that, from the ſize of the raven down to
" that of the wood-pecker, flutter round our
" habitations, and rather with the ſpirit of pil-
" ferers than of robbers, make free with the
" fruits of human induſtry.

" Of all the other claſſes, this ſeems to be
" that which the leaſt contributes to furniſh
" out the pleaſures, or ſupply the neceſſaries
" of man. The falcon hunts for him; the
" poultry tribe ſupplies him with luxurious
" food; and the little ſparrow race delights him
" with the melody of their warblings. The
" crane kind make a ſtudied variety in his en-
" tertainments; and the claſs of ducks are
" not only many of them delicate in their
" fleſh, but extremely uſeful for their feathers.
" But in the claſs of the pie kind there are
" few, except the pigeon, that are any way uſeful.
" They ſerve rather to teize man than to aſſiſt
" or amuſe him. Like faithleſs ſervants, they
" are fond of his neighbourhood, becauſe they
" moſtly live by his labour; but their chief
" ſtudy is what they can plunder in his ab-
" ſence, while their deaths make him no atone-
" ment for their depredation.

" But

" But though, with reſpect to man, this " whole claſs is rather noxious than beneficial, " though he may conſider them in this light, " as falſe, noiſy, troubleſome neighbours, yet, " with reſpect to each other, no claſs of birds " are ſo ingenious, ſo active, or ſo well fitted " for ſociety. Could we ſuppoſe a kind of " morality among birds, we ſhould find that " theſe are by far the moſt induſtrious, the moſt " faithful, the moſt conſtant, and the moſt " connubial. The rapacious kinds drive out " their young before they are fit to ſtruggle " with adverſity; but the pie kind cheriſh their " young to the laſt. The poultry claſs are " faithleſs and promiſcuous in their connections, " but theſe live in pairs, and their attachments " are wholly confined to each other. The " ſparrow kind frequently overleap the bounds " of Nature, and make illicit varieties; but " theſe never. They live in harmony with " each other; every ſpecies is true to its " kind, and tranſmits an unpolluted race to " poſterity.

" As other kinds build in rocks, or upon " the ground, the chief place where theſe build " is in trees or buſhes; the male takes his

" ſhare

" ſhare in the labours of building the neſt: and " often relieves his mate in the duties of incu- " bation. Both take this office by turns; and " when the young are excluded, both are " equally active in making them an ample pro- " viſion.

" They ſometimes live in ſocieties; and in " theſe there are general laws obſerved, and a " kind of republican form of government eſta- " bliſhed among them. They watch not only " for the general ſafety, but for that of every " other bird of the grove. How often have " we ſeen a fowler, ſtealing in upon a flock of " ducks or wild geeſe, diſturbed by the alarm- " ing notes of a crow or a magpie; its ſingle " voice gave the whole thoughtleſs tribe warn- " ing, and taught them in good time to look to " their ſafety.

" Nor are theſe birds leſs remarkable for " their inſtincts than their capacity for inſtruc- " tion. There is an apparent cunning, or " archneſs in the look of the whole tribe; and " I have ſeen crows and ravens taught to fetch " and carry with the docility of a ſpaniel. In- " deed, it is often an exerciſe that, without " teaching, all this tribe are but too fond of.

" Every

" Every body knows what a paſſion they have " for ſhining ſubſtances, and ſuch toys as ſome " of us put a value upon. A whole family has " been alarmed at the loſs of a ring: every " ſervant has been accuſed, and every creature " in the houſe, conſcious of their own " innocence, ſuſpected each other, when, " to the utter ſurpriſe of all, it has been " found in the neſt of a tame magpie, or " a jack-daw, that nobody had ever thought " of.

" However, as this claſs is very numerous, " it is not to be ſuppoſed that the manners " are alike in all. Some, ſuch as the pigeon, " are gentle and ſerviceable to man; others " are noxious, capricious, and noiſy. In a " few general characters they all agree; " namely, in having hoarſe voices, ſlight " active bodies, and a facility of flight, that " baffles even the boldeſt of the rapacious kinds " in the purſuit."

THE RAVEN.

THE Raven is a large ſtrong bodied bird, and ſome have been ſeen which meaſured near two foot from the tip of the bill to the end of the tail; it has a ſtrong, ſharp, black bill, the upper part of which is ſomewhat hooked, the lower very near ſtraight, the whole body is black, but bears a kind of bluiſh ſplendor or gloſs, more eſpecially upon the tail and wings; the belly is of a paler colour, and more inclining to a brown, it has ſtrong limbs with large crooked claws; 'tis ſaid by ſome that it will devour living birds after the manner of hawks, but it feeds chiefly upon carrion and dead carcaſſes, and ſometimes upon fruit and inſects.

They are found in every region of the world, are ſtrong and hardy, and uninfluenced by the changes of the weather; when other birds ſeem numbed with cold, or pining with famine, the raven is active and healthy, buſily employed in prowling

prowling for prey, or ſporting in the coldeſt atmoſphere. He bears the heat under the line, and the cold of the polar countries with equal indifference. He is ſometimes indeed ſeen milk white, which moſt probably ariſes from the ſame influence of the climate which has an effect upon moſt other animals in the northern part of the world, where their robes, particularly in winter, aſſume the colour of the country they inhabit.

White ravens are often ſhewn among us, and it is pretended they are rendered ſo by art; and ſometimes by the cruel practice of plucking out all their black feathers while alive; in which caſe, it is ſaid, they will be ſucceeded by others perfectly white. In their habits and diſpoſitions they are extremely docile, and a raven may be reclaimed to almoſt every purpoſe to which birds can be converted. He may be trained up for fowling like an hawk; he may be taught to fetch and carry like a ſpaniel; he may be taught to ſpeak like a parrot, and even taught to ſing like a man: for Goldſmith ſays, "I have heard a raven ſing the Black Joke with great diſtinctneſs, truth, and humour."

When the raven is taken from the neſt, and trained up as a domeſtic, he has many qualities that render him extremely amuſing. Buſy, inquiſitive, and impudent, he goes every where, affronts and drives off the dogs, plays his pranks on the poultry, and is particularly aſſiduous in cultivating the good will of the cookmaid, who with him is the favorite of the family. But with all theſe amuſing qualities he is not deſtitute of vices and defects. He is a glutton by nature, and a thief by habit. He does not confine himſelf to petty depredations on the pantry, for the gratification of his appetite, but he ſoars at plunder he can neither exhibit nor enjoy, but which, like a miſer, he reſts ſatisfied with having the ſatisfaction of ſometimes viſiting and contemplating in ſecret. A piece of money, a tea-ſpoon, or a ring, are always tempting baits to his avarice; theſe he will ſlily ſeize upon, and carry to ſome favorite hole, which he has previouſly fixed upon for the purpoſe.

In his wild ſtate the raven is an active and greedy plunderer. Nothing comes amiſs to him; whether his prey be living, or has been ſome time dead, it is all the ſame, he falls to with

with a voracious appetite; and when he has gorged himſelf flies to acquaint his fellows, that they may participate of the ſpoil. If he beholds a carcaſs in the poſſeſſion of ſome more powerful animal, as a wolf, a fox, or a dog, the raven ſits at a little diſtance, an humble ſpectator till it has done, knowing, from experience, that he ſhall come in for a ſhare upon its departure. If in his flights he perceives no hopes of carrion, and his ſcent is ſo exquiſite that he can ſmell it at a vaſt diſtance, he then contents himſelf with fruits, inſects, and the accidental deſert of a dunghill.

The raven chiefly builds its neſt in trees, and lays five or ſix eggs of a pale green colour, marked with ſmall browniſh ſpots. They live ſometimes in pairs, and ſometimes they frequent, in great numbers, the neighbourhood of populous cities, where they are uſeful in devouring thoſe carcaſſes that would otherwiſe putrefy and infect the air. They build in high trees or old towers, in the beginning of March with us in England, and ſometimes ſooner, as the ſpring is more or leſs advanced for the ſeaſon. But it is not always near towns that they fix their retreats; they often build in unfrequented places, and drive all other birds from

from their vicinity. They will not permit even their young to keep in the ſame diſtrict, but drive them off when they are ſufficiently able to ſhift for themſelves.

In their wild ſtate they are exceedingly cunning and miſchievous, and whenever they obſerve a ſheep or lamb which is ſick or helpleſs they are ſure to pick out its eyes; yet in moſt countries they have a degree of reſpect paid to them, and in the eaſtern countries they were held in great veneration, as being the birds that fed the prophet Elijah in the wilderneſs. This prepoſſeſſion in favour of the raven is of very ancient date, as even the Romans, who thought the bird ominous, paid it, from motives of fear, the moſt profound veneration. One of them, which, according to Pliny, had been kept in the temple of Caſtor, flew down into the ſhop of a taylor, who took much delight in the viſits of his new acquaintance. He taught the bird ſeveral tricks, but particularly to pronounce the names of the emperor Tiberius, and the whole royal family. The taylor was beginning to grow rich by thoſe who came to ſee this wonderful raven, till an envious neighbour, diſpleaſed at the taylor's ſucceſs, killed the bird, and deprived the taylor of his hopes of future fortune.

fortune. The Romans, however, took the poor taylor's part; they puniſhed the man who offered the injury, and gave the raven all the honours of a magnificent interment.

Birds in general live longer than quadrupeds, and the raven is ſaid to be one of the moſt long-lived of the number. Heſiod aſſerts that a raven will live nine times as long as a man; but though this is fabulous, it is certain that ſome of them have been known to live near an hundred years. In clear weather the ravens fly in pairs to a great height, making a deep loud noiſe, different from that of their uſual croaking; and from having a ſtrong ſcent and clear ſight they are thus enabled to perceive their prey at a conſiderable diſtance.

The *common carrion-crow* is conſiderably leſs than the raven, and has a ſtraight, ſtrong, thick bill, a good deal like the raven's; the feathers over the whole body are black, only the bottom parts of them are rather of a lead colour. It feeds generally upon the dead and putrified carcaſſes of animals, of almoſt any kind, and will likewiſe devour birds, grain, and many ſorts of inſects. It builds upon high trees, and lays four or five eggs, much like the raven's, but not ſo large. This bird is ſaid to have

have a very ſagacious ſcent, inſomuch that it will ſmell gunpowder at a conſiderable diſtance, ſo that it is difficult to ſhoot it.

The account Alonzo de Ovallo gives of the crows of the Chili is very remarkable; he ſays that thoſe years that are to prove rainy, it is obſerved by the inhabitants, that as ſoon as the weather grows cold, before the winter begins, they are certain to ſee, every evening, for many days together, great quantities of crows come down from the Cordeliers into the plains; they come an hour before ſun ſet, in ſquadrons, forming a triangle or pyramid, the point of which is led by a ſingle one, before whom none dare go; the figure they make is moſt regular with great correſpondency to each other, as if they were fixed in the air and immoveable, ſo equal and well concerted is their flight.

Morella, in his deſcription of Congo, ſays the crows there are white upon their breaſts and on the tops of their wings, but black every where elſe, like thoſe in Europe.

We now proceed to the *rook*, which though bearing a great ſimilarity, and is therefore conſidered as appertaining to the ſame claſs, is, nevertheleſs, very different in his diſpoſition, as neither he, nor any of thoſe of whom he may be

be ſaid to ſtand at the head, are, in the ſmalleſt degree, carnivorous, but feed entirely on grain and inſects. He is ſomething larger than the crow, and they may be diſtinguiſhed by their bills, the rook's being of a whitiſh colour; they are ſaid to have no craw, but a ſort of gullet below the bill, which upon occaſion dilates itſelf into a ſort of bag, wherein it carries its meat from a conſiderable diſtance that it has gathered for its young.

The *royſton crow* is about the ſame ſize; his breaſt, belly, back, and upper part of the neck, are of a pale aſh colour; his head and wings gloſſed over with a fine blue. He is a bird of paſſage, viſiting this kingdom in the beginning of winter and leaving it in the ſpring. He breeds, however, in different parts of the Britiſh dominions; and his neſt is common enough in trees in Ireland.

The *jack-daw* is alſo black on the upper parts, but aſh-coloured on the breaſt and belly. He is not above the ſize of a pigeon. He is docile and loquacious. His head being large for the ſize of his body, which, as has been remarked, argues him ingenious and crafty. He builds in ſteeples, old caſtles, and high rocks, laying five or ſix eggs in a ſeaſon.

The *Corniſh chough* is like a jack-daw, but bigger, and almoſt the ſize of a crow. The feet and legs are long, like thoſe of a jack-daw, but of a red colour; and the plumage is black all over. It frequents rocks, old caſtles, and churches, by the ſea-ſide, like the daw, and with the ſame noiſy aſſiduity. It is only ſeen along the weſtern coaſts of England. Theſe are birds very ſimilar in their manners, feeding on grain and inſects, living in ſociety, and often ſuffering caſtigation from the flock for the good of the community.

The rook builds in woods and foreſts in the neighbourhood of man, and ſometimes makes choice of groves, in the very midſt of cities, for the place of its retreat and ſecurity. In theſe it eſtabliſhes a kind of legal conſtitution, by which all intruders are excluded from coming to live among them, and none ſuffered to build but acknowledged natives of the place. "I "have often, ſays a celebrated author, amuſed "myſelf with obſerving their plan of policy "from my window that looks upon a grove "where they have made a colony in the midſt "of the city. At the commencement of ſpring, "the rookery, which, during the continuance "of winter, ſeemed to have been deſerted, or

"only

" only guarded by about five or ſix, like old " ſoldiers in a garriſon, now begins to be once " more frequented, and in a ſhort time all the " buſtle and hurry of buſineſs is fairly com- " menced. Where theſe numbers reſided " during the winter is not eaſy to gueſs; per- " haps in the trees of hedge-rows, to be nearer " their food. In ſpring, however, they culti- " vate their native trees, and, in the places " where they were themſelves hatched, they " prepare to propagate a future progeny.

" They keep together in pairs; and when " the offices of courtſhip are over they pre- " pare for making their neſts and laying. The " old inhabitants of the place are all already " provided; the neſt which ſerved them for years " before, with a little trimming and dreſſing, " will ſerve very well again; the difficulty of " neſtling lies only upon the young ones who " have no neſt, and muſt therefore get up one " as well as they can. But not only the " materials are wanting but alſo the place in " which to fix it. Every part of a tree will " not do for this purpoſe, as ſome branches " may not be ſufficiently forked; others may " not be ſufficiently ſtrong; and ſtill others " may be too much expoſed to the rockings

" of the wind. The male and female upon " this occaſion are, for ſome days, ſeen exa- " mining all the trees of the grove very atten- " tively; and when they have fixed upon a " branch that ſeems fit for their purpoſe, they " continue to ſit upon, and obſerve it very ſe- " dulouſly for two or three days longer. The " place being thus determined upon, they be- " gin to gather the materials for their neſt; " ſuch as ſticks and fibrous roots, which they " regularly diſpoſe in the moſt ſubſtantial man- " ner. But here a new and unexpected ob- " ſtacle ariſes. It often happens that the young " couple have made choice of a place too " near the manſion of an older pair, who do " not chuſe to be incommoded by ſuch trouble- " ſome neighbours. A quarrel therefore in- " ſtantly enſues; in which the old ones are " always victorious.

" The young couple, thus expelled, are " obliged again to go through the fatigues of " deliberating, examining and chuſing; and " having taken care to keep their due diſtance, " begin their neſt again, and their induſtry de- " ſerves commendation. But their alacrity is " often too great in the beginning; they ſoon " grow weary of bringing the materials for their

" neſt

" neſt from diſtant places, and they very eaſily
" perceive that ſticks may be provided nearer
" home, with leſs honeſty, indeed, but with ſome
" degree of addreſs. Away they go, therefore,
" to pilfer as faſt as they can; and wherever
" they ſee a neſt unguarded, they take care to
" rob it of the very choiceſt ſticks of which it
" is compoſed. But theſe thefts never go un-
" puniſhed; and probably upon complaint be-
" ing made there is a general puniſhment in-
" flicted. I have ſeen eight or ten rooks come
" upon ſuch occaſions, and ſetting upon the
" new neſt of the young couple all at once,
" tear it to pieces in a moment.

" At length, therefore, the young pair find
" the neceſſity of going more regularly and ho-
" neſtly to work. While one flies to fetch the
" materials, the other ſits upon the tree to guard
" it; and thus in the ſpace of three or four
" days, with a ſkirmiſh now and then between,
" the pair have fitted up a commodious neſt
" compoſed of ſticks without, and of fibrous
" roots and long graſs within. From the in-
" ſtant the female begins to lay, all hoſtilities
" are at an end; not one of the whole grove,
" that a little before treated her ſo rudely, will
" now venture to moleſt her; ſo that ſhe

" brings

" brings forth her brood with patient tranquil-
" lity. Such is the ſeverity with which even
" native rooks are treated by each other; but
" if a foreign rook ſhould attempt to make
" himſelf a denizen of their ſociety, he would
" meet with no favour; the whole grove
" would at once be up in arms againſt him,
" and expel him without mercy."

Theſe birds are found in moſt countries; in ſome every means is taken to deſtroy them, while in others they are conſidered as a benefit; for as they live chiefly on the worm of the dor-beetle and on grain, they may be ſaid to do as much ſervice by deſtroying that noxious inſect, as they do injury by conſuming the produce of the field.

Of this tribe of the crow-kind, there are a great number of varieties.

The *calao*, or *horned Indian raven*, exceeds the common raven in ſize, and habits of depredation. But what he differs in from all other birds is the beak, which, by its length and curvature at the end, appears deſigned for rapine; but then it has a kind of horn ſtanding out from the top, which looks ſomewhat like a ſecond bill, and gives this bird, otherwiſe fierce and ugly, a very formidable appearance. The horn

horn ſprings out of the forehead, and grows to the upper part of the bill, being of great bulk; ſo that near the forehead it is four inches broad, not unlike the horn of the rhinoceros, but more crooked at the tip. Were the body of the bird anſwerable in ſize to the head, the calao would exceed in magnitude even the vulture or the eagle; but the head and beak are out of all proportion, the body being not much larger than that of a hen. In this race, however, there is conſiderable difference, for in thoſe which come from different parts of Africa, the body is proportionable to the beak; in ſuch as come from the Molucca Iſlands, the beak bears no proportion to the body. Of what uſe this extraordinary excreſcence is to the bird is not eaſy to determine; it lives, like others of its kind, upon carrion, and ſeldom ventures to attack a living animal.

The *night raven*, which is very common in Holland, has a long bill, black at the point, and of a yellowiſh green towards the baſe, which colour extends towards the back part of the eyes, and is encircled with a white line from the bill, the iris of the eyes are of an orange colour, and upon the top of the head there is a kind of black crown, from the back part of which

which there is a curious creſt of three white feathers, that are at leaſt five inches long, and which hang down over the back, and diſtinguiſh it from all other birds; it is of a yellowiſh brown on the upper part of the neck, white under the chin, and upon the breaſt, with a faint tincture of brown; its back and wings black, ſhaded with green, ſome of the edges of the feathers being tinctured with red. They principally feed upon beetles and other inſects, are full as large as a common raven, build their neſts upon very high trees, and lay four or five whitiſh eggs.

The *capricalca* is called by the Hollanders *rotganſon*, and is a little larger than the common crow, but ſomewhat leſs than the raven; he has a ſtrong hooked bill, the wings and back are of a lead colour, the tail ſhort and black; his flight and voice very much reſembles that of a wild gooſe, the breaſt and belly are adorned with tranſverſe dark coloured lines, he ſometimes inhabits the fens, at others, he lays waſte the corn fields; he is ſaid to frequent little brooks in the winter time, and is a great deſtroyer of the young fry of fiſh, he is found chiefly in the Northern countries, and is very common.

common in the iſlands about the north of Scotland.

Dr. Gemelli, in his account of New Spain, ſays there is a bird of this kind found there which they call the *ſuppilotote*, with a tuft of fleſh growing upon its head, that will eat no carrion, and another very much like it, with a tuft of feathers on the head, that not only eats carrion but all the filth of the city and country, inſomuch, that at Vera Cruz it is forbidden to kill any of them, on account of that particular ſervice.

THE MAGPIE AND ITS AFFINITIES.

THE Magpie is the chief of a moſt conſiderable race, which branches out into ſuch an extenſive variety, that it is next to an impoſſibility to trace the whole of them. They have, however, ſome general characteriſtics which belong to the whole tribe, ſuch, for example, as ſtraight powerful bills, legs of an extra-

ordinary length for the ſize of their bodies, and a party coloured plumage; they all have, beſides a chattering kind of manner, which is both harſh and diſſonant, when compared with the melody of the little warblers with whom they may be ſaid to reſide, and whom they conſtantly interrupt in their harmony. In the tropic regions they are exceedingly numerous, and where it may be ſaid, that although they diſturb the harmony, they add to the beauty of the ſcene, by the ſplendor of their plumage. In the woods of thoſe warm climates, the whole of this tribe may be recogniſed at one view, although they can be diſtinguiſhed only as the pie, the jay, the roller, the chatterer, and the toucan; notwithſtanding each of them extend into an hundred varieties.

At the head of them, as we before obſerved, ſtands the magpie, whoſe tail is long and wings ſhort, it has a large white ſpot on the breaſt, another on each ſide of the body, and ſeveral of the wing-feathers are white, the other part of its plumage is black, beautifully ſhaded; indeed, its black, white, green, and purple, with the rich and gilded combination of the gloſſes on its tail, are as fine as any that adorn the moſt beautiful of the feathered tribe.

But

But it has ſo many trifling qualities that they depreciate theſe natural perfections; vain, reſtleſs, loud, and quarrelſome, it is an unwelcome intruder every where; and never miſſes an opportunity, when it finds one, of doing miſchief.

The magpie bears a great reſemblance to the butcher-bird in its bill, which has a ſharp proceſs near the end of the upper chap, as well as in the ſhortneſs of its wings, and the form of the tail, each feather ſhortening from the two middlemoſt. But it agrees ſtill more in its food, living not only upon worms and inſects, but alſo upon ſmall birds when they can be ſeized. A wounded lark, or a young chicken ſeparated from the hen, are ſure plunder; and it will even ſometimes have the aſſurance to attack a thruſh or blackbird: nay, it will even teize the largeſt animals, when its inſults can be offered with ſecurity. As a proof of this we may appeal to almoſt every man who reſides in the country, who muſt often have ſeen a magpie perched upon the back of an ox or a ſheep, pecking out the inſects which might have taken refuge in their hides; chattering and tormenting the poor animal at the ſame time, and ſtretching out its neck for combat, if the beaſt turned

its head backward to interrupt its employment. They ſeek out alſo the neſts of ſmall birds; and if the old ones eſcape, the eggs make up for the deficiency; the thruſh and the black-bird are thus frequently robbed by this aſſaſſin, and to which circumſtance their not being more numerous may, in ſome meaſure, be attributed.

The magpie is by no means particular in its food; it ſhares with ravens in their carrion, with rooks in their grain, and with the cuckoo in bird's eggs; but it ſeems poſſeſſed of a prudence ſeldom uſual with gluttons, for when ſatisfied it lays up the remainder of the feaſt for another occaſion. Even in a domeſticated ſtate it will hide its food when done eating, and after a time return to the ſecret hoard with renewed appetite and vociferation.

From every action the magpie evidently demonſtrates that it poſſeſſes a degree of inſtinct ſuperior to other birds. Its neſt is not leſs remarkable for the manner in which it is compoſed than for the place made choice of to build it in. It is uſually placed in a very conſpicuous ſituation, either in the middle of ſome hawthorn-buſh, or on the top of ſome high tree. But careleſs as this may appear to be on the firſt glance, yet on examination it will be found

found to have been the choice of ſagacity, for the place ſo choſen is invariably difficult of acceſs; the tree pitched upon uſually grows in ſome thick hedge-row, fenced by brambles at the root; or when in a buſh, ſuch a one is ſelected that it is hardly poſſible to get to the top twigs in which its neſt is interwoven. When a ſecure place is choſen the next care is to fence the neſt above, ſo as to defend it from all the various enemies of the air. The kite, the crow, and the ſparrow-hawk, are to be guarded againſt, for as their neſts have been ſometimes plundered by the magpie, ſo it is reaſonably feared that they will take the firſt opportunity to retaliate. To prevent this, the magpie's neſt is built with ſurpriſing labour and ingenuity. The body of the neſt is compoſed of hawthorn branches, the thorns ſticking outward, but well united together by their mutual inſertions. Within it is lined with fibrous roots, wool, and long graſs, and then curiouſly plaſtered all round with mud and clay. The canopy, which is to defend it above, is compoſed of the ſharpeſt thorns, woven together in ſuch a manner as to deny all entrance, except at the opening, which is left on the ſide, juſt large enough to permit egreſs and regreſs to the

the owners. In this fortreſs the male and female hatch and bring up their brood with ſecurity, ſheltered from all attacks of the feathered race, and are but ſeldom diſturbed by man. They lay ſix or ſeven eggs, of a pale green colour, ſpotted with brown.

The magpie, when kept in a domeſtic ſtate, ſtill preſerves its natural character with ſtrict propriety. The ſame noiſy, miſchievous habits attend it to the cage that were conſpicuous in the woods; and being more cunning, ſo it is alſo a more docile bird than any other taken into keeping. It is very eaſily taught to articulate words, and even ſentences, very diſtinctly, but its ſounds are too thin and ſharp to be an exact imitation of the human voice.

The *jay* ſtands next in the tribe, and is one of the moſt beautiful of the Britiſh birds. The forehead is white, ſtreaked with black; the head is covered with very long feathers, which it can erect into a creſt at pleaſure; the whole neck, back, breaſt, and belly, are of a faint purple, ſhaded with grey; the wings are moſt beautifully barred with blue, black, and white; the tail is black, and the feet of a pale brown. Like the magpie it feeds upon fruits, will kill ſmall birds, and is extremely docile.

The

The *Bengal jay* is a larger ſized bird than the Engliſh jay; has an aſh-coloured bill, and the top of the head blue; the neck and breaſt are a mixture of light brown and red, with a little caſt of the lead colour; the wings, and the under part of the body and thighs, are blue, the upper parts of a muddy dark green; that part of the tail next to the rump, and alſo at the extremity, is of a dark blue; but the middle part is more pale and bright. The legs and feet are brown, a little inclining to a yellow; with black, open claws. It is a voracious ſort of bird, and a devourer of fruit.

The *chatterer*, or by ſome called the *Bohemian jay*, may be placed next; it is ſomewhat leſs than the common jay. It is variegated with a beautiful mixture of colours; red, aſh colour, cheſnut, and yellow; but what diſtinguiſhes it from all other birds are the horny appendages from the tips of ſeven of the leſſer quill-feathers, which ſtand bare of beards, and have the colour and gloſs of the beſt red ſealing-wax.

The *roller* is not leſs beautiful than any of the former. The breaſt and belly are blue; the head green; and the wings variegated with blue, black, and white. But it may be diſtinguiſhed from all others of this kind by a ſort of

of naked tubercles or warts near the eyes, which ſtill farther contribute to increaſe its beauty.

It would be almoſt an endleſs taſk to follow the multiplicity of varieties that have an affinity with the magpie kind, for all the tropical foreſts of the eaſt and weſt abound with birds remarkable for diſcordant voices and brilliant plumage. There is one of them, however, which merits particular notice, as being the moſt ſingular of any of the feathered creation, this is the *toucan*, whoſe bill is nearly as large as the reſt of its whole body.

There are four or five varieties of this ſpecies, but the *red-beaked toucan* is the moſt particular, and is thus moſt minutely deſcribed by Edwards. "It is about the ſize of and "ſhaped like a jack-daw, with a large head to "ſupport its monſtrous bill; this bill, from "the angles of the mouth to its point, is ſix "inches and an half; and its breadth, in the "thickeſt part, is a little more than two. Its "thickneſs, near the head, is one inch and a "quarter; and it is a little rounded along "the top of the upper chap, the under ſide "being round alſo; the whole of the bill ex-"tremely ſlight, and a little thicker than parch-"ment.

" ment. The upper chap is of a bright " yellow, except on each ſide, which is of a " fine ſcarlet colour; as is alſo the lower chap, " except at the baſe, which is purple. Be- " tween the head and the bill there is a black " line of ſeparation all round the baſe of the " bill, in the upper part of which the noſtrils " are placed, and are almoſt covered with " feathers, which has occaſioned ſome writers " to ſay, that the toucan has no noſtrils. " Round the eyes, on each ſide of the head, is " a ſpace of bluiſh ſkin, void of feathers, above " which the head is black, except a white ſpot " on each ſide, joining to the baſe of the upper " chap. The hinder part of the neck, the " back, wings, tail, belly, and thighs, are black. " The under ſide of the head, throat, and the " beginning of the breaſt, are white. Between " the white on the breaſt, and the black on the " belly, is a ſpace of red feathers, in the form " of a new moon, with its horns upwards. " The legs, feet, and claws, are of an aſh " colour; and the toes ſtand like thoſe of " parrots, two before and two behind."

Notwithſtanding it is furniſhed with ſo formidable a beak it is harmleſs and gentle, and we learn, from many authorities, that it may

eaſily be rendered ſo tame as to ſit and hatch its young in houſes. Goldſmith ſays, it feeds chiefly upon pepper, which it devours very greedily, gorging itſelf in ſuch a manner that it voids it crude and unconcocted, and which is no objection to the natives from uſing it again; nay, that they even prefer it before that pepper which is freſh gathered from the tree, and ſeem perſuaded that its ſtrength and heat is qualified by the bird, and that all its noxious qualities are thus exhauſted.

We ſhall not undertake to vouch for the veracity of this aſſertion, but it is very certain that the toucan lives only upon a vegetable diet, for when in a domeſtic ſtate, to which it is frequently brought in the warm countries where it is bred, it always prefers ſuch food to all other. Pozzo, who bred one tame, aſſerts, that it leaped up and down, wagged the tail, and cried with a voice reſembling that of a magpie. It fed upon the ſame things that parrots do, but was moſt greedy of grapes, which, being plucked off one by one, and thrown into the air, it would moſt dexterouſly catch before they fell to the ground. Its bill, he adds, was hollow, and upon that account very light, ſo that it had but little ſtrength in

ſo

ſo apparently formidable a weapon; nor could it peck or ſtrike ſmartly therewith. But its tongue ſeemed to aſſiſt the efforts of this unwieldy machine; it was long, thin, and flat, not unlike one of the feathers on the neck of a dunghill cock; this it moved up and down, and often extended five or ſix inches from the bill. It was of a fleſh colour, and very remarkably fringed on each ſide with very ſmall filaments, exactly reſembling a feather.

It has been ſuppoſed by naturaliſts that this long tongue had greater ſtrength than the thin hollow beak that contains it; and that the beak was only a kind of ſheath for this peculiar inſtrument, which the toucan uſes, not only in making its neſt, but alſo in obtaining its proviſion. It is certain, ſay they, that this bird builds its neſt in holes of trees, which have been previouſly ſcooped out for this purpoſe; and it is not very likely that ſo feeble a bill could be any ways ſerviceable in working upon ſuch hard materials.

However this may be, no bird ſecures its young better from external injury than the toucan. It has not only birds, men, and ſerpents, to guard againſt, but a numerous tribe

of monkeys, ſtill more prying, miſchievous, and deſtructive, than all the reſt. For its ſecurity, however, it by ſome means ſcoops out a neſt into the hollow of ſome tree, leaving only a hole juſt large enough to go in and out. There it ſits, with its great beak, guarding the entrance; and if the monkey ventures to offer a viſit of curioſity, the toucan gives him ſuch a diſagreeable reception that he is glad to make off with the greateſt expedition.

This bird is only found in the warm climates of South America, where it is in great requeſt, both for the delicacy of its fleſh, which is tender and nouriſhing, and for the beauty of its plumage, particularly the feathers of the breaſt. The ſkin of this part the Indians pluck off, and, when dry, glue to their cheeks, and which they conſider as an irreſiſtible addition to their beauty.

FIG. 25.
Bird of Paradise.

FIG. 26.
King Bird of Paradise.

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THE BIRD OF PARADISE.

OF all the various animals which travellers have mentioned and naturaliſts have deſcribed, the Bird of Paradiſe has given riſe to the greateſt number of opinions and aſſertions, and at the ſame time the moſt various and contradictory. It has been ſeriouſly inſiſted on by ſome that they were inhabitants of the air, never lighting on the ground, and that they ſubſiſted entirely upon the dew of heaven; nay, Navarett, in his hiſtory of China, carries it ſo far as to add, that he was induced from this circumſtance to enquire, how theſe birds contrived to hatch their eggs, and was told by the natives, that the hens laid them upon the backs of the cocks, and there hatched them; and which tale, notwithſtanding its incredibility, had his belief, conſidering it, as he well might, as a kind of miracle. There are others not quite

quite ſo credulous, who believe in its never reſting below, but inſiſt that it feeds upon the inſects which hover in the air; and there are ſtill others, who ſo far from allowing it to ſubſiſt on ſuch ſlight food, boldly aſſert that it is even a bird of prey; but all of them agreeing in this one particular, namely, that theſe birds have neither feet nor legs.

The whole of theſe ſingular peculiarities have however been long exploded, and the Bird of Paradiſe admitted to poſſeſs the ſame inclination for food as other birds, and not only to have legs and feet, but alſo to reſt both on the trees and ground. What ſeems to have led to the ſuppoſition that they had not, was an artifice in the natives of the Molucca iſlands, where theſe birds chiefly inhabit, and from whence they firſt were brought. Mandelſo obſerves that the native ſavages were particularly partial to keeping theſe birds for the ſplendor of their plumage, and therefore, upon catching them, took out their inſides, and cut off their legs cloſe to their bodies, they being exceeding ill-formed, the ſkin of which cloſing up, left not the ſmalleſt appearance of their ever having had any. The Europeans naturally expreſſing an admiration at the beauty of this bird's plumage,

and

and the natives, conſidering its legs as a great deformity, upon being aſked after them, aſſerted that it had none, leſt their being ſeen ſhould diminiſh its eſtimation, and conſequently its value. From this deception in the firſt inſtance, we may ſuppoſe all the foregoing abſurdities to have ariſen. The ſavages inſiſted that it had no legs, and the Europeans not diſcovering the ſmalleſt traces of any, gave credit to the aſſertion, and then *ingeniouſly* ſupplied the concluſion, that as it had no legs, it muſt unavoidably be an inhabitant of the air, where legs were unneceſſary.

Theſe ridiculous ſtories were, however, of no long continuance, their abſurdity led to enquiry, enquiry demonſtrated facts, and thoſe facts have clearly aſcertained the real hiſtory of this no leſs beautiful than harmleſs bird.

Of the Birds of Paradiſe there are two kinds, the one, which is the moſt common, about the ſize of a pigeon, though it appears to be much larger, and the other, which is not ſo well known, not bigger than a lark. They are both ſufficiently diſtinguiſhed from all other birds, not only by the ſuperior brilliancy of their tints, but by having two long ſlender filaments growing from the upper part of the tail, which

which are longer than the bird's body, and bearded only at the end, and by which peculiarity the bird of Paradiſe may be eaſily known.

This bird appears to the eye to be larger than a pigeon, though in reality the body is not much bigger than that of a thruſh. The tail, or rather the feathers which extend from the under part, is much longer than the body; and the wings are large, compared with the bird's other dimenſions. The head, the throat, and the neck, are of a pale gold colour. The baſe of the bill is ſurrounded by black feathers, as alſo the ſide of the head and throat, as ſoft as velvet, and changeable, like thoſe on the neck of a mallard. The hinder part of the head is of a ſhining green, mixed with gold. The body and wings are chiefly covered with beautiful brown, purple, and gold feathers. The uppermoſt part of the tail-feathers are of a pale yellow, and the under ones, which ſpread out ſo extenſively, white, for which reaſon the hinder part of the tail appears to be all white. But the moſt curious circumſtance is the two long naked feathers above-mentioned, which extend from the upper part of the rump above the tail, and which are uſually about three feet long.

long. Theſe are bearded only at the beginning and the end; the whole ſhaft, for above two feet nine inches, being of a deep black, while the feathered extremity is of a changeable colour, like the mallard's neck.

This bird, which for beauty exceeds almoſt all others, is a native of the Molucca Iſlands, but found in greateſt numbers in that of Aro; in the delightful and ſpicy woods of that country they are to be ſeen in large flocks, ſo that it may be ſaid, the groves which produce the richeſt ſpices abound with the fineſt birds. The native inhabitants are ſo partial to them as to give them the name of God's birds, as being ſuperior to all others that he has made. They live in large flocks, and at night generally perch upon the ſame, or neighbouring trees. They are called by ſome the *ſwallows of Ternate*, from their rapid flight, and from their being continually on the wing in purſuit of inſects, which are their uſual prey.

The Birds of Paradiſe may, in ſome ſort, be conſidered as birds of paſſage, for when the rains ſet in, and continual tempeſts agitate the air (which happens every ſeaſon), they are not to be ſeen, but to what parts they reſort to has not hitherto been diſcovered. Like ſwallows

they have their ſtated times of return, which is about the beginning of Auguſt, when they are ſeen in great numbers flying together, always, if we may credit the inhabitants, preceded by one they call the king, and who is diſtinguiſhed from the reſt by the ſuperior luſtre of his plumage, and that reſpect and veneration which is paid him by the reſt. In the evening they perch upon the higheſt trees of the foreſt, particularly on one which bears a red berry, which they ſometimes eat, when other food fails them. In what manner they breed, or what may be the number of their young, not one traveller who has viſited thoſe countries has yet been able ſatisfactorily to aſcertain.

Since they have been in requeſt by Europeans the natives have become very ſedulous in their endeavours to obtain them; and their mode is to conceal themſelves in the trees where theſe birds reſort, and from which places of concealment they ſhoot at them with arrows made of reeds, and, as they aſſert, if they happen to kill the king, they then have a good chance for killing the greateſt part of the flock. The chief mark by which they know the king is by the ends of the long feathers in his

his tail, which have eyes like thoſe of a peacock, and the want of thoſe under feathers which ſpread ſo conſiderably beneath his wings and tail. When they have taken a number of theſe birds their uſual method is to gut them, and cut off their legs; they then run a hot iron into the body, which dries up the internal moiſture, and filling the cavity with ſalts and ſpices, they ſell them to the Europeans, and in which ſtate their plumage will keep in good preſervation and perfect beauty for a number of years.

THE WOOD-PECKER AND ITS AFFINITIES.

UNDER the general term Wood-pecker, is comprehended a moſt numerous tribe, divided into an almoſt innumerable number of varieties; but they have ſeveral common habits, and are eaſily diſtinguiſhed from all others, by their peculiar formation, method of procuring food, and manner of providing a place of ſafety for their young. Indeed, no other ſpecies of birds ſeem ſo well formed for the method of life they purſue, being fitted by nature, at all points, for the peculiarity of their condition. They live chiefly upon the inſects contained in the body of trees; and for this purpoſe are furniſhed with a ſtraight, hard, ſtrong, angular, and ſharp bill, made for piercing and boring. They have a tongue of a very great length; round, ending in a ſharp, ſtiff, bony thorn, dentated on each ſide, to ſtrike ants and inſects when

Tropick Bird & Nest.

Cuckoo. *Woodpecker.*

when diſlodged from their cells. Their legs are ſhort and ſtrong, for the purpoſes of climbing. Their toes ſtand two forward, and two backward; which is particularly ſerviceable in holding by branches of trees. They have hard ſtiff tails, to reſt upon when climbing. They feed only upon inſects, and want that inteſtine, which anatomiſts call the *cæcum*; a circumſtance peculiar to this tribe only.

Of this bird there are many kinds, and many varieties in each kind; and which are very numerous in the foreſts of every part of the world. They differ in ſize, colour, and appearance; and agree only in the marks above-mentioned, or in thoſe habits which reſult from ſo peculiar a conformation. It would be a no leſs tedious than difficult taſk to attempt entering into a general deſcription of the whole of this tribe, we ſhall therefore confine our obſervations to thoſe which ſtand the moſt conſpicuous amongſt them; and with which all the others bear a ſtrong affinity.

The *green wood-ſpite*, or *wood-pecker*, is called the *rain-fowl* in ſome parts of the country; becauſe, when it makes a greater noiſe than ordinary, it is ſuppoſed to foretell rain. It is about the ſize of a jay; the throat, breaſt,

breaſt, and belly are of a pale greeniſh colour; and the back, neck and covert feathers of the wings are green, the large feathers of the wings are beautifully ſpotted towards the edges; the top of the head is of a crimſon colour, and the tail-feathers alternately marked with dark green and black. The wings are pretty long, meaſuring eighteen or twenty inches when extended from point to point. But the bill and tongue of this little animal are its moſt diſtinguiſhed characteriſtics, and which ſerve for its ſupport and defence. As already obſerved, the wood-pecker feeds upon inſects, and particularly on thoſe which are lodged in the body of hollow or of rotting trees; in the diſcovery of which, the extraordinary ſtrength of his bill is of the greateſt advantage; traverſing up and down the trunk of the tree, he keeps ſtriking with his bill, and where the place ſounds hollow he ſtops, and by continued blows penetrates a hole in the bark ſufficient to receive his bill, which he then thruſts in, and ſends forth a loud whiſtling into the cavity, in order to diſengage the inſects, and put them into motion; which he has no ſooner done, than he makes uſe of his tongue, which proves an excellent inſtrument for procuring this food;

it

it is round, ending in a ſtiff, ſharp, bony tip, dentated on both ſides, like the beard of an arrow; and which he can dart out three or four inches from the bill, and draw in again at pleaſure. The prey is thus transfixed, and drawn into the bill, which being ſwallowed, the dart is again launched at freſh game. Nothing has employed the attention of the curious in this part of anatomy, more than the contrivance by which the tongue of this bird performs its functions with ſuch great celerity; and by their obſervations they find that the tongue is drawn back into the bill by the help of two ſmall round cartilages, faſtened into the fore-mentioned bony tip, and running along the length of the tongue. Theſe cartilages, from the root of the tongue, take a circuit beyond the ears; and being reflected backwards to the crown of the head, make a large bow. The muſcular, ſpongy fleſh of the tongue, encloſes theſe cartilages, like a ſheath; and is ſo made, that it may be extended or contracted like a worm. The cartilages indeed have muſcles accompanying them along their whole length backwards. But there is ſtill another contrivance; for there is a broad muſcle, joining the cartilages to the bones of the ſkull, which

which, by contracting or dilating, forces the cartilages forward through the tongue, and then forces the tongue and all through the bill, to be employed for the animal's preſervation in piercing its prey.

The wood-pecker, as we before obſerved, diſcovers, by its natural ſagacity, the rotten part of a tree, and which part almoſt always contains ants eggs and a variety of inſects; having found out the ſpot, reſting by its ſtrong claws, and leaning on the thick feathers of its tail, it begins to bore with its ſharp ſtrong beak, until it penetrates pretty largely into the internal habitation. Upon which, either through pleaſure at the ſight of its prey, or with a deſire to alarm the inſect colony, it ſends forth a loud cry, which throws terror and confuſion into the whole inſect tribe; they are put into general motion, endeavouring to provide for their own ſafety, while the bird luxurioufly feaſts upon them at leiſure, darting its tongue with unerring certainty, and quits not its ſituation until it has devoured the whole, or ſatiſfied its appetite. At times, either from a want of ſupply, or from an inclination to change their food, they will ſeek out the ant-hills; and here again they ſhew a peculiar ſagacity,

gacity, for as the ants are generally too deep under the earth for them to reach with their tongues, they peck away the top, which diſturbing the neſt, the ants are put in motion, which the wood-peckers obſerving, they thruſt out their long tongues as far as they are able, and as the ants come upon them, they draw them in with wonderful celerity, and by this means never fail of obtaining a plentiful ſupply.

The wood-pecker not only makes holes in trees to procure its food, but ſtill larger ones to form its neſt, and even this ſeemingly arduous taſk they alſo perform with the bill, although ſome have affirmed that the animal uſes its tongue as a gimblet, to bore with; but this is a ſuppoſition evidently founded in error, ſince in large woods and foreſts, the noiſe of the bill has, and frequently may be heard, while they are employed in that office. It is, however, certain that they ſelect for this purpoſe trees that are decayed, or wood that is ſoft, like beech, elm, and poplar. In theſe, with very little trouble, they make holes as exactly round as a mathematician could with compaſſes. As they find no great hardſhip in making theſe holes, they are very difficult in their choice, and often make twenty before one gives

entire ſatisfaction; but having once fixed, they never forſake it until they have brought up their young. Beyond making the cavity, they are extremely indolent with reſpect to the formation of their neſts, not taking the trouble to give them any kind of lining, but depoſit their eggs in the hole, without any thing to keep them warm, except the heat of the parent's body. Their number is generally five or ſix; always white, oblong, and of a middle ſize. When the young are excluded, and before they leave the neſt, they are adorned with a ſcarlet plumage under the throat, which adds to their beauty.

The *great ſpotted wood-pecker* is not ſo large as the green wood-pecker, ſeldom weighing more than three ounces; the wings when extended being about fourteen inches from each extremity; it has a ſtraight black bill which grows thicker towards the head, and is about an inch long, ending in a ſharp point, channelled with a furrow or two, with a ſort of black hairs, or briſtles, growing out of the noſtrils, the iris of the eyes red, and the tongue much the ſame as that of the green wood-pecker.

The

The top of the head is black, daſhed with a ſhining ſort of green, the ſides of it, and the feathers that encompaſs the baſe of the upper chap, and alſo thoſe about the eyes, are white, with a line of fine crimſon on the back part, that runs from ſide to ſide, and joins to the white on each ſide of the head, with a large black ſtroke reaching from the corner of the mouth to the back, as low as the inſertion of the wings, croſſed with a black line juſt below the head; on the ſide of each wing is a great white ſpot, the other parts of the wings are black, beautifully interſperſed with ſemi-circular white ſpots; the interior covert feathers of which are white, the exterior have one or two white ſpots, the baſe or ridge is whitiſh.

The tail is ſtrong and ſtiff about three inches long, with a forked end, bending inwards; the outermoſt feather on each ſide, black, with a white ſpot on the exterior web with ſome few tranſverſe black ſtrokes, the tip of a reddiſh white.

The *Leſſer Spotted Wood-pecker* very much reſembles the other for ſhape and colour, but is conſiderably leſs; the wings when extended, being about ten inches from each point, and its weight about twelve drachms; the breaſt, throat

and belly are of a duniſh white, it has a broad ſtreak of red upon the top of the head, the back part of which is black, with a ſort of duſky colour about the noſtrils; round the eyes to near the middle of the neck, on both ſides, is a broad line of white feathers, which terminate with black, except about the ears, where the colour is much the ſame as that of the throat; the covert feathers of the wings are black; the prime feathers, and the reſt of the covert feathers beautifully ſpotted with a ſort of ſemicircular white ſpots; the middle part of the back white, with black croſs-lines. The hen is diſtinguiſhed from the cock by a white ſtroke upon the top of the head, where the cock has a red one.

The *Great Black Wood-pecker* is one of the largeſt of this ſpecies; the breadth between the tips of the wings, when extended, being near thirty inches, and its weight upwards of half a pound.

The bill, from the point to the angles of the mouth, being upwards of two inches in length, is triangular, and very ſtrong, of a ſort of party-coloured black and white; the tongue, when extended, is of a very great length; the head is large, the eyes are of a pale yellow, the noſtrils round

round, and covered with reflected hairs; the colour of the whole body is black, only the crown of the head, which, down to the noſtrils, is of a beautiful ſcarlet colour. The tail is made up of very ſtrong feathers, which are ſtiff, and ſharp pointed at the ends, bending inwards, about ſix or ſeven inches long, which, in climbing trees, they reſt upon, as a ſupport to their bodies; the fore part of the legs are feathered down to the feet, the back part no farther than the knees, the claws large and ſtrong, the feet of a lead colour; they feed upon hexapods, worms, ants and other inſects; it is a bird not very frequently found in this kingdom.

Aldrovandus obſerves that ſome or other of the different ſpecies of wood-peckers are found in moſt parts of Europe; they build in hollow trees, and make a very artificial neſt, which, if taken out of the tree whole, appears round, and in ſize reſembles a foot-ball.

The above will be ſufficient to demonſtrate the numerous branches there are contained in this extenſive family, and from which, it is to be preſumed, that a pretty correct idea of the whole race may be drawn, eſpecially as their general habits and manners perfectly correſpond

pond with thoſe of the green-wood pecker, which we have, upon that account, ſo minutely detailed.

Before, however, we quit them entirely we muſt refer to a ſmaller tribe, who, though poſſeſſing the general characteriſtics, nevertheleſs differ very much in many particulars. In our climate there are few, if any exceptions, to be found among the whole race of woodpeckers to their forming their neſts in the trunks of trees, depoſiting their eggs therein, and hatching their young, without providing any kind of materials; but this circumſtance is very differently managed and attended to by thoſe who inhabit the warmer climates of Guinea and Braſil, and which has been thus moſt ingeniouſly deſcribed:—"A traveller, "who walks into the foreſts of thoſe countries "among the firſt ſtrange objects that excite "curioſity, is ſtruck with the multitude of "birds neſts hanging at the extremity of almoſt "every branch. Many other kind of birds "build in this manner; but the chief of them "are of the woodpecker kind; and indeed, "there is not, in the whole hiſtory of Nature "a more ſingular inſtance of the ſagacity of "thoſe little animals in protecting themſelves

"againſt

" againſt ſuch enemies as they have moſt oc-
" caſion to fear. In cultivated countries a
" great part of the caution of the feathered
" tribe is to hide or defend their neſts from the
" invaſions of man, as he is their moſt dreaded
" enemy; but in the depth of thoſe remote
" and ſolitary foreſts, where man is but ſeldom
" ſeen, the little bird has nothing to appre-
" hend from him. The parent is careleſs how
" much the neſt is expoſed to general notice,
" if the monkey and the ſnake can be guarded
" againſt. For this purpoſe its neſt is built
" upon the depending points of the moſt out-
" ward branches of a tall tree, ſuch as the
" banana, or the plantane. On one of thoſe
" immenſe trees is ſeen the moſt various, and
" the moſt inimical aſſemblage of creatures
" that can be imagined. The top is inhabited
" by monkies of ſome particular tribe, that
" drive off all others; lower down twine
" about the great trunk numbers of the larger
" ſnakes, patiently waiting till ſome unwary
" animal comes within the ſphere of their
" activity; and at the edges of the tree hang
" theſe artificial neſts, in great abundance, in-
" habited by birds of the moſt delightful plu-
" mage.

" The

" The neſt is uſually formed in this manner: " when the time of incubation approaches " they fly buſily about in queſt of a kind of " moſs, called by the Engliſh inhabitants of " thoſe countries *old man's beard.* It is a " fibrous ſubſtance, and not very unlike hair, " which bears being moulded into any form, " and ſuffers being glued together. This, " therefore, the little woodpecker, called by " the natives of Braſil the *guiratemga*, firſt " glues by ſome viſcous ſubſtance, gathered in " the foreſt, to the extremeſt branch of a tree; " then building downward, and ſtill adding " freſh materials to thoſe already procured, a " neſt is formed, that depends, like a pouch, " from the point of the branch: the hole to " enter at is on the ſide, and all the interior " parts are lined with the finer fibres of the " ſame ſubſtance, which compoſe the whole.

" Such is the general contrivance of theſe " hanging neſts, which are made, by ſome " other birds, with ſtill ſuperior art. A little " bird of the Groſbeak kind, in the Philippine " iſlands, makes its neſt in ſuch a manner that " there is no opening but from the bottom. " At the bottom the bird enters, and goes up " through a funnel, like a chimney, till it

" comes

" comes to the real door of the neſt, which " lies on one ſide, and only opens into this " funnel.

" Some birds glue their neſt to the leaf of " the banana-tree, which makes two ſides of " their little habitation, while the other two " are artificially compoſed by their own in- " duſtry. But theſe, and all of the kind, are " built with the ſame precautions to guard " the young againſt the depredations of monkies " and ſerpents, which abound in every tree. " The neſt hangs there, before the ſpoilers, a " tempting object, which they can only gaze " upon, while the bird flies in and out, without " danger or moleſtation, from ſo formidable a " vicinity."

The plumage of thoſe which inhabit the tropic regions are exceedingly various.

The *gold-merle*, or *hanging woodpecker*, is a very curious bird, and is found in Germany, Italy, and ſometimes in the ſouthern parts of France in the months of March and April; its whole plumage is blue and green beautifully intermixed all over the body; it has a black beak, and a black ſpot on each ſide, between the bill and the eyes; and the large wing-feathers of the hen are blackiſh, with white

ſpots at the ends. Pliny ſays that theſe birds hang on the branches of trees by the legs, when they ſleep, with their heads downwards; that their food is chiefly the ſame as that of the common woodpecker, only theſe add thereto that of figs, of which they are extremely fond; and that they build their neſts on the extremities of the boughs of large high trees, which are very curiouſly contrived, ſo as to keep out the rain and the wind, having only a ſmall hole for the bird to go in and out.

THE CUCKOO.

THE Cuckoo is a genus of birds belonging to the *picæ* order of naturaliſts, of which, though forty-ſix ſpecies are enumerated, we ſhall deſcribe only a few of the moſt noticeable.

1. The *common*, or *carnivorous cuckoo*; of this bird, the head, hind part of the neck, covert of the wings and rump are of a dove colour, darker on the head and paler on the rump; the throat, and upper part of the neck, are

are of a pale grey; the breaſt and belly white, croſſed elegantly with undulated lines of black; the tail conſiſts of ten feathers of unequal lengths; the two middle tail-feathers are black, tipped with white; the others are marked with white ſpots on each ſide their ſhafts. The legs are ſhort, and the toes diſpoſed two backwards and two forwards, like thoſe of the woodpecker, though it is never obſerved to run up the ſides of trees. The female differs in ſome reſpects. The neck, before and behind, is of a browniſh-red; the tail barred of the ſame colour; and ſpotted on each ſide the ſhaft with white. The young birds are brown mixed with black, and in that ſtate have been deſcribed by ſome authors as old ones.

The length of this bird is about 14 inches, and its breadth 25: it weighs about five ounces: the bill is black, and about two thirds of an inch in length; and the prominent rotundity of its noſtrils diſtinguiſh it peculiarly from other birds.

The return of this migratory bird is generally an indication of returning ſpring, and the real advancement of the year; though it makes the ſhorteſt ſojournment with us of any bird of paſſage. There is a remarkable coincidence

obſerved between the ſong of theſe birds and mackarel's continuing in full roe; that is, from about the middle of April to the latter end of June. The cuckoo is ſilent for ſome time after his arrival; and his pleaſant, though uniform note, is a call to love, and uſed only by the male, who ſits perched generally on ſome dead tree, or bare bough, and repeats his ſong, which he loſes as ſoon as the amorous ſeaſon is over.

The note of this bird, though the ſound of it is conſtantly aſſociated with the idea of ſummer, and its attendant pleaſures, is, in all countries, uſed in a reproachful ſenſe: Shakeſpeare ſays,—

> The plain ſong *cuckoo* grey
> Whoſe note full many a man doth mark
> And dares not anſwer *nay*.

Yet Juvenal's idea ſeems as juſt,

> Tu tibi nunc *corruca* places.

On the natural hiſtory of the cuckoo we have a very curious paper, by Mr. Jenner, in the Philoſophical Tranſactions for 1788:— "The firſt appearance of cuckoos in this coun- "try, as already obſerved, is about the middle "of April; (the 17th, according to Mr. Jen- "ner, whoſe obſervations were made in Glou- "ceſterſhire

" ceſterſhire). The ſong of the male, which " is well known, ſoon proclaims its arrival. " The ſong of the female (if the peculiar " notes of which it is compoſed may be ſo " called) is widely different, and has been ſo " little attended to, that perhaps few are ac- " quainted with it: the cry of the dab-chick " bears ſome reſemblance to it.

" Unlike the generality of birds, cuckoos " do not pair. When a female appears on the " wing ſhe is often attended by two or three " males, who ſeem to be earneſtly contending " for her favours. From the time of her ap- " pearance till after the middle of ſummer, the " neſts of the birds ſelected to receive her " eggs are to be found in great abundance; " but, like the other migrating birds, ſhe does " not begin to lay till ſome weeks after her " arrival.

" It is on all hands allowed, that the cuckoo " does not hatch its own eggs; for which " different reaſons have been given, as will be " afterwards noticed. The hedge-ſparrow, the " water-wagtail, the titlark, the red-breaſt, the " yellow-hammer, the green-linnet, or the " whinchat, is generally the nurſe of the young " cuckoo. It may be ſuppoſed, that the fe-

male

" male cuckoo lays her eggs in the abſence of " the bird in whoſe neſt ſhe intends to depoſit; " as it has been known, that on ſight of one of " theſe, a redbreaſt, and its mate, jointly at- " tacked her on approaching the neſt, putting " her to flight, and ſo effectually drove her " away that ſhe did not dare to return, (as we " have obſerved, page 24). Among the birds " above-mentioned it generally ſelects the three " firſt, but ſhews a much greater partiality to " the hedge-ſparrow. This laſt commonly " takes up four or five days in laying her eggs. " During this time (generally after ſhe has " laid one or two) the cuckoo contrives to de- " poſit her egg among the reſt, leaving the " future care of it entirely to the hedge- " ſparrow. This intruſion often occaſions " ſome diſcompoſure, for the old hedge-ſparrow " whilſt ſhe is ſitting, not unfrequently throws " out ſome of her own eggs, and ſometimes " injures them in ſuch a way that they be- " come addle; ſo that it more frequently " happens that only two or three hedge- " ſparrows eggs are hatched with the cuckoo's " than otherwiſe. But whether this be the " caſe or not, ſhe ſits the ſame length of time " as if no foreign egg had been introduced,

" the

" the cuckoo's egg requiring no longer in-
" cubation than her own.

" When the hedge-ſparrow has ſat her uſual
" time, and diſengaged the young cuckoo, and
" ſome of her own offspring, from the ſhell,
" her own young ones, and ſuch of the eggs
" that remain unhatched, are ſoon turned out,
" the young cuckoo remaining poſſeſſer of the
" neſt, and ſole object of her future care.
" The young birds are not previouſly killed,
" nor are the eggs demoliſhed, but all are left
" to periſh together, either entangled about the
" buſh which contains the neſt, or lying on
" the ground under it.

" The early fate of the young hedge-ſparrows
" is a circumſtance that has been noticed by
" others, but attributed to wrong cauſes. A
" variety of conjectures have been formed
" upon it. Some have ſuppoſed the parent
" cuckoo the author of their deſtruction;
" while others, as erroneouſly, have pro-
" nounced them ſmothered by the diſpropor-
" tionate ſize of their fellow-neſtling. Now
" the cuckoo's egg being not much larger
" than the hedge-ſparrow's, it neceſſarily fol-
" lows, that at firſt there can be no great dif-
" ference in the ſize of the birds juſt burſt

" from

" from the ſhell. Of the fallacy of the former " aſſertion alſo I was ſome years ago convinced, " by having found that many cuckoo eggs were " hatched in the neſt of other birds after the " old cuckoo had diſappeared; and by ſeeing " the ſame fate then attend the neſtling ſparrows " as during the appearance of old cuckoos in " this country."

From much attention, and a variety of examples, Mr. Jenner was enabled to aſcertain this curious fact relative to the incubation and rearing of the young cuckoo; a fact, he acknowledges ſo much out of the ordinary courſe of nature, as might reaſonably excite a doubt.

The ſmallneſs of the cuckoo's egg, in proportion to the ſize of the bird, is a circumſtance to be noticed; being generally ſmaller than that of the houſe-ſparrow; though the difference in the ſize of the birds is nearly as five to one. The colour of the cuckoo's egg is alſo very variable; but often reſembling the houſe-ſparrow's.

The mode by which the young cuckoo contrives to eject the native poſſeſſor of the neſt is highly curious. The little animal, with the aſſiſtance of its rump and wings, contrives to get the young ſparrow (or other bird) upon its

its back; and making a lodgement for the burthen, by elevating its elbows, clambers backwards with it up the ſide of the neſt till it reaches the top, where reſting a moment, it throws off its burthen with a jirk, and quite diſengages it from the neſt; remaining for a little time in that ſituation, and feeling about with the extremities of its wings, to be convinced that the buſineſs is properly executed.

The number of neſtlings deſtroyed by the cuckoo, muſt undoubtedly be very great; but though nature permits this waſte, yet the animals thus deſtroyed, are not thrown away, or rendered uſeleſs. At the ſeaſon when this happens, great numbers of tender quadrupeds and reptiles, are ſeeking proviſions; and if they find the callow neſtlings which have fallen victims to the young cuckoo, they are furniſhed with food well adapted to their peculiar ſtate.

Why the cuckoo ſhould not, like other birds, build a neſt, incubate its eggs, and rear its young, is a circumſtance that naturaliſts, ancient or modern, have been unable to reſolve. Mr. Jenner ſuggeſts the following as the moſt plauſible reaſons: "The ſhort reſi-
"dence this bird is allowed to make in the
"country where it is deſtined to propagate its

" ſpecies, and the call that nature has upon it,
" during that ſhort reſidence, to produce a nu-
" merous progeny."

The growth of the young cuckoo is extremely rapid; it has a plaintive chirp, but not learned from its foſter-parent; and it never acquires the adult note during its ſtay in this country. A fierceneſs of diſpoſition ſhews itſelf long before it leaves the neſt; for when irritated, it aſſumes the manners of a bird of prey, looks ferocious, throws itſelf back, and pecks with great vehemence at any thing preſented to it, often making a chuckling noiſe like a young hawk.

In a ſtate of nature, caterpillars ſeem to be the chief food of the cuckoo; but when brought up tame, as is often the caſe, they will eat bread, milk, fruit, inſects, eggs, and fleſh either cooked or raw. When fat, they are ſaid to be good eating. The ancient Romans admired them. Pliny ſpeaks of them as a delicacy; and the French and Italians eat of them to this day.

Africa is ſuppoſed to be the ſcene of their migration, ſince they are obſerved to viſit the iſland of Malta twice a year; that is, in their paſſage backwards and forwards to that part of

the

the world. The cuckoo is ſaid to be common in Sweden, but to appear a month later than with us. And Ruſſia is not deſtitute of them, as appears by a ſpecimen brought from Kamtſchatka, now in the poſſeſſion of Sir Joſeph Banks.

2. The *Americanus*, or cuckoo of Carolina, is about the ſize of a black bird, the upper mandible of the bill black, the lower yellow; the large wing feathers are reddiſh; the reſt of the wing, and all the upper part of the body, head and neck, is of an aſh colour; all the under part of the body, from the bill to the tail, white; the tail long and narrow, compoſed of ſix long, and four ſhorter feathers; their legs ſhort and ſtrong. Their note is very different from the cuckoo of this country, and not ſo remarkable to be taken notice of. It is a ſolitary bird, frequenting the dark receſſes of woods and ſhady thickets. They retire on the approach of winter.

3. The *Indicator*, or honey-guide, is a native of Africa. The following deſcription is given of it by Dr. Sparrman in the Philoſophical Tranſactions for 1777. "This curious "ſpecies of cuckoo is found at a conſiderable "diſtance from the Cape of Good Hope, in

" the interior parts of Africa, being entirely " unknown at that ſettlement. The Dutch " ſettlers thereabouts have given this bird the " name of 'honey guide,' from its quality of " diſcovering wild honey to travellers. Its co- " lour has nothing ſtriking or beautiful. Its " ſize is conſiderably ſmaller than that of our " cuckoo in Europe; but in return, the in- " ſtinct which prompts it to ſeek its food in a " ſingular manner, is truly admirable. Not " only the Dutch and Hottentots, but likewiſe " a ſpecies of quadruped, named *ratel*, (proba- " bly a new ſpecies of badger), are frequently " conducted to wild bee-hives by this bird, " which, as it were, pilots them to the very " ſpot. The honey being its favourite food, " its own intereſt prompts it to be inſtrumental " in robbing the hive, as ſome ſcraps are com- " monly left for its ſupport. The morning and " evening are its time of feeding, and it is then " heard calling in a ſhrill tone, *cherr*, *cherr*; " which the honey-hunters carefully attend to " as the ſummons to the chace. From time to " time they anſwer with a ſoft whiſtle; which " the bird hearing, always continues its note. " As ſoon as they are in ſight of each other, " the bird gradually flutters towards the place

" where

" where the hive is ſituated, continually re-
" peating its former call of *cherr*, *cherr*; nay,
" if it ſhould happen to have gained a conſi-
" derable way before the men, it returns to
" them again, and redoubles its note, as it were
" to reproach them with their inactivity. At
" laſt the bird is obſerved for a few moments
" to hover over a certain ſpot, and then ſilently
" retiring to a neighbouring buſh or reſting
" place, the hunters are ſure of finding the bees
" neſt in that identical ſpot; whether it be in
" a tree, or the crevice of a rock, or, as is
" moſt commonly the caſe, in the earth.
" Whilſt the hunters are buſy in taking the
" honey, the bird is ſeen looking on attentively
" to what is going forward, and waiting for
" its ſhare of the ſpoil. The bee-hunters never
" fail to leave a ſmall portion for their con-
" ductor; but commonly take care not to leave
" ſo much as would ſatisfy its hunger. The
" bird's appetite being whetted by this parſi-
" mony, it is obliged to commit a ſecond trea-
" ſon, by diſcovering another bees' neſt, in
" hopes of a better ſalary. It is further ob-
" ſerved, that the nearer the bird approaches
" the hidden hive, the more frequently it re-
" peats

"peats its call, and ſeems the more impatient. "I have had frequent opportunities of ſeeing "this bird, and have been witneſs to the de- "ſtruction of ſeveral republics of bees by means "of its treachery. I had, however, but two "opportunities of ſhooting it, which I did to "the great indignation of my Hottentots. It "is about ſeven inches in length, and is of a "ruſty brown colour on the back, with a "white breaſt and belly." A neſt which was ſhewn to Dr. Sparrman for that of this bird, was compoſed of ſlender filaments of bark, woven together in the form of a bottle; the neck and opening hung downwards, and a ſtring, in an arched ſhape, was ſuſpended acroſs the opening faſtened by the two ends, perhaps for the bird to perch on.

4. The *Cape cuckoo* is a trifle ſmaller than ours; the bill a deep brown, the upper part of the body a greeniſh brown; the under parts of the body white, croſſed with lines of black, the legs reddiſh brown. It inhabits the Cape of Good Hope; and is moſt likely the ſame bird which is called *edolis*, from its pronouncing that word frequently in a low melancholy tone.

tone. Voyagers alſo mention another cuckoo which is common at Loango, in Africa. It is bigger than ours, but of the ſame colour, and repeats the word *cuckoo* like that bird, but in different inflexion of voice.

5. The *honoratus*, or *ſacred cuckoo*, is ſomewhat leſs than our cuckoo; the general colour is blackiſh aſh in the upper parts, marked with two ſpots of white on each feather; beneath white, tranſverſely ſpotted with aſh-colour. This ſpecies inhabits Malabar, where the natives hold it ſacred. It feeds on reptiles, which, perhaps, may be ſuch as are the moſt obnoxious; if ſo, this ſeeming ſuperſtition may have ariſen from a more reaſonable foundation than many others of the like ſort.

6. The *ſhining cuckoo* is the ſize of a ſmall thruſh; the bill is bluiſh; the upper part of the body green, with a rich gilded gloſs; the under parts are white, tranſverſely waved with green gold; the under tail coverts almoſt white; the quills and tail duſky brown; the legs are bluiſh. This inhabits part of New Zealand, where it is called *poops-arowro*.

7. The

7. The *vetula* is a trifle bigger than a black-bird. This ſpecies inhabits Jamaica, where it is frequent in the woods and hedges all the year round. It feeds on ſeeds, ſmall worms and caterpillars, and is very tame. This bird has the name *tacco* from its cry, which is like that word; the firſt ſyllable of this is pronouced boldly, the other following in a full octave lower than the firſt. It has alſo another cry like *qua, qua, qua*; but that only when alarmed by an enemy. Beſides inſects it will alſo eat lizards, ſmall ſnakes, frogs, young rats, and ſometimes even ſmall birds. The ſnakes they ſwallow head foremoſt, letting the tail hang out of the mouth till the fore-parts are digeſted. This bird, it is moſt likely, might be eaſily tamed, as it is ſo gentle as to ſuffer the negro children to catch it with their hands. Its gait is that of leaping like a magpie; being frequently ſeen on the ground, and its flight but ſhort, chiefly from buſh to buſh. At the time when other birds breed, they likewiſe retire into the woods, but their neſts have never yet been found, from which one ſhould be induced to think, that they were indebted to other birds for the rearing their young in the manner

manner of the common cuckoo. It has the name of *rain-bird*, as it is ſaid to make the greateſt noiſe before rain; and is common all the year at Jamaica. In another ſpecies or variety, common in Jamaica, the feathers on the throat appear like a downy beard, whence, probably, aroſe the name of *old-man rain-bird*, given there, and by Ray, Sloane, &c.

8. The *Nævius*, *ſpotted cuckoo*, or *rail-bird*, is about the ſize of a field-fare; it inhabits Cayenne, and is often ſeen perched upon gates and rails, whence its named.

9. The *Cayanus*, or *Cayenne cuckoo*, is the ſize of the blackbird, and in that country goes by the name of *devil*. The natives conſider it as a bird of ill omen; and will not touch its fleſh, which is certainly very bad and lean; it is remarkably tame, and will ſuffer itſelf almoſt to be touched without offering to eſcape.

Thirty-ſeven other ſpecies are enumerated in various parts of the world, but they are deſtitute of peculiarities to render their hiſtory intereſting.

THE PARROT.

THIS is alſo a genus which comprehends a numerous race, and branches out into an almoſt immenſity of ſpecies, ſo much ſo, that we perfectly agree with the Comte de Buffon, in his remark, that if the nomenclators had no other motive than to make a catalogue they might have ſwelled out a volume with Parrots alone, eſpecially if they were inclined to conſider every change of colour as a particular ſpecies, and little elſe different is there in many of their diſtinctions. Linnæus reckons forty-ſeven varieties, while Briſſon enumerates ninety-five, and even that number might be doubled with equal propriety. But quitting theſe elaborate philoſophers, who frequently attempt to eſtabliſh a diſtinction almoſt without a difference, we ſhall conſider them under the general applications given by thoſe who ſeem beſt acquainted with them, which

The Lory.

Green Parrott.

which are no more than four; namely, the large kind, which are of the ſize of a raven, are called *maccaws*; the next ſize are ſimply called *parrots*; thoſe which are entirely white, are called *lories*; and the ſmalleſt, *paroquets*. The difference between even theſe is rather in the ſize than in any other peculiar conformation, as they are all formed alike, having toes, two before and two behind, for climbing and holding; ſtrong hooked bills for breaking open nuts, and other hard ſubſtances, on which they feed; and loud harſh voices, by which they fill their native woods with clamour. Their voices, indeed, are more like a man's than that of any other bird; the raven's is too hoarſe, and the jay's and magpie's too ſhrill to reſemble the truth; the parrot's note is of the true pitch, and capable of a number of modulations.

The facility with which this bird is taught to ſpeak, and the great number of words which it is capable of repeating, are no leſs ſurpriſing. We are aſſured, by a grave writer, that one of theſe was taught to repeat a whole ſonnet from Petrarch; and this may very eaſily be credited, ſince whimſical inſtances, which have been produced by their repeating certain

phraſes, are in the power of almoſt every one to relate. We can ſpeak from our own knowledge of one that would call to the vender of any article who cried it under the window where it hung, and upon the man or woman aſking, "Did you call, Ma'am?" It would reply, "No, none to day," to the no ſmall mortification of the party it had ſtopped, and the mirth of the ſpectator; with whom it would inſtantly join in an hearty laugh. There is a curious ſtory of this kind told by Willoughby, who ſays, that "A parrot belonging to King "Henry the Seventh, who then reſided at "Weſtminſter, in his palace by the river "Thames, had learned to talk many words "from the paſſengers as they happened to take "water. One day, ſporting on its perch, the "poor bird fell into the water, at the ſame "time crying out, as loud as he could, *A boat!* "*twenty pound for a boat!* A waterman, who "happened to be near, hearing the cry, made "to the place where the parrot was floating, "and taking him up reſtored him to the king. "As it ſeems the bird was a favourite, the "man inſiſted that he ought to have a reward "rather equal to his ſervices than his trouble; "and, as the parrot had cried twenty pounds,

"he

" he ſaid the king was bound in honour to " grant it. The king at laſt agreed to leave " it to the parrot's own determination, which " the bird hearing, cried out, *Give the knave* " *a groat.*"

The Parrot is a native of the tropic regions; and in the Eaſt and Weſt Indies they are as numerous and familiar as ravens and crows are with us. They are formed with a number of peculiarities from almoſt every other bird; for, beſides thoſe already alluded to, their toes are contrived in a ſingular manner, which appears when they walk or climb, and when they are eating. For the firſt purpoſe they ſtretch two of their toes forward and two backward; but when they take their meat, and bring it to their mouths with their foot, they dexterouſly and nimbly turn the greater hind toe forward, ſo as to take a firmer graſp of the nut, or the fruit they are going to feed on, ſtanding all the while upon the other leg. They do not even preſent their food in the uſual manner; for other animals turn their meat inwards to the mouth; but theſe, in a ſeemingly-aukward poſition, turn their meat outwards, holding the nuts, for example, as it were, from them, till with their bills they break the ſhell, and extract the

the kernel. And here we find another very great ſingularity, for the upper as well as the lower chap is moveable. In moſt other birds the upper chap is connected, and makes but one piece with the ſkull; but in theſe, and in one or two other ſpecies of the feathered tribe more, the upper chap is connected to the bone of the head by a ſtrong membrane, placed on each ſide, that lifts and depreſſes it at pleaſure. By this formation they can open their bills the wider, which is highly neceſſary to them, from the upper chap being ſo hooked and ſo overhanging, that, if the lower chap only had motion, they could ſcarce gape wide enough to take in ſufficient for their ſuſtenance.

As theſe birds cannot readily hop from bough to bough, their legs not being adapted for that purpoſe, when inclined to climb they uſe both the beak and the feet, firſt catching hold with the beak, as if with a hook, and drawing up the legs and faſtening them; then advancing the head and the beak again, and ſo putting forward the body and the feet alternately, till they accompliſh their intentions.

We have already obſerved that the tongue of this bird ſomewhat reſembles that of a man, and to which cauſe has been attributed their being

being ſo well qualified to imitate the human ſpeech; but it has been clearly demonſtrated, by ſeveral celebrated anatomiſts, that the organs by which theſe ſounds are articulated, lie farther down in the throat, being performed by the great motion which the *os hyoides* has in theſe birds beyond what is the caſe with any others of the feathered race.

The parrot, though common enough in Europe, will not, however, breed in any part of it. The climate is too cold for its warm conſtitution, and though it can withſtand our winter, when arrived at maturity, yet it always ſeems ſenſible of the cold, and loſes both its ſpirit and appetite during the inclement part of the ſeaſon. It then becomes inactive, and ſeems quite changed from that buſtling loquacious animal it appears during the warmth of ſummer. They will, however, live even here a conſiderable time, if properly attended to and taken care of. It requires much pains and practice to teach them to ſpeak, for at firſt they obſtinately reſiſt all inſtruction, and are only to be won by perſeverance; after being continually teized, as it were, with one ſound, and at the ſame time kept in good humour by careſſes

careſſes and fondneſs, they will begin endeavouring to imitate what they ſo conſtantly hear, and having once caught the firſt ſound, and being able to repeat the firſt word, they afterwards learn with great facility, and repeat with good articulation.

It is remarked by Goldſmith, that "In going through the towns of France ſome time "ſince, I could not help obſerving how much "plainer their parrots ſpoke than ours, and "how very diſtinctly I underſtood their parrots ſpeak French, when I could not always "underſtand our own, though they ſpoke my "native language. I was at firſt for aſcribing "it to the different qualities of the two languages, and was for entering into an elaborate "diſcuſſion on the vowels and conſonants; but "a friend that was with me ſolved the difficulty "at once, by aſſuring me that the French "women ſcarce did any thing elſe the whole "day than ſit and inſtruct their feathered pupils; "and that the birds were thus diſtinct in their "leſſons in conſequence of continual ſchooling."

But however expert the parrots of France may be, they are very inferior to thoſe of the Braſils, where the education of a parrot is conſidered

ſidered as a very ſerious affair. Cluſius aſſures us that the parrots of that country are the moſt ſenſible and cunning of all animals not endued with reaſon; particularly the great parrot, called the *aicurous*, the head of which is adorned with yellow, red, and violet, the body green, the end of the wings red, the feathers of the tail long and yellow: this bird, he aſſerts, which is ſeldom brought into Europe, is a prodigy of underſtanding, and as an inſtance gives the following account: "A certain Braſilian wo-"man, that lived in a village two miles diſtant "from the iſland on which we reſided, had a "parrot of this kind which was the wonder of "the place. It ſeemed endued with ſuch un-"derſtanding, as to diſcern and comprehend "whatever ſhe ſaid to it. As we ſometimes "uſed to paſs by that woman's houſe, ſhe uſed "to call upon us to ſtop, promiſing, if we gave "her a comb, or a looking-glaſs, that ſhe would "make her parrot ſing and dance to entertain "us. If we agreed to her requeſt, as ſoon as "ſhe had pronounced ſome words to the bird, "it began not only to leap and ſkip on the "perch on which it ſtood, but alſo to talk "and to whiſtle, and to imitate the ſhoutings "and exclamations of the Braſilians when they

" prepare for battle. In brief, when it came " into the woman's head to bid it ſing, it ſang; " to dance, it danced. But if, contrary to our " promiſe, we refuſed to give the woman the " little preſent agreed on, the parrot ſeemed to " ſympathize in her reſentment, and was ſilent " and immoveable; neither could we, by any " means, provoke it to move either foot or " tongue."

It is not in a domeſtic ſtate alone, that parrots ſhew their ſagacity, for they give various inſtances that cunning is natural to them in their native reſidence among the woods. There they live together in flocks, and mutually aſſiſt each other againſt their enemies, either by their courage or notes of warning. They generally breed in hollow trees, where they make a round hole, but take no trouble to line their neſts within. If they find any part of a tree beginning to rot from the breaking off of a branch, or any ſuch accident, this they take care to ſcoop, and to make the hole ſufficiently wide and convenient; but they frequently content themſelves with the hole which a woodpecker has wrought out, and then forſook, from not being perfectly agreeable to its mind. In this kind of neſt the common parrot generally

rally lays two, or at moſt three eggs, which are like thoſe of the pigeon, and about the ſame ſize. They are always marked with little ſpecks, like thoſe of a partridge. It is, however, to be obſerved, that the ſmaller kinds ſometimes lay four or five; but this only tends to ſtrengthen the remark we have had frequent occaſion to make, namely, that the ſmaller the animal, the more prolific. Some travellers aſſure us, that their neſts are always found in the trunks of the talleſt, the ſtraighteſt, and the largeſt trees; and that the natives of thoſe countries, who have little elſe to do, are very aſſiduous in watching out the places where the parrot is ſeen to neſtle, becauſe thoſe birds have always the greateſt docility that are taken young from the neſt, and are therefore the moſt eſteemed by Europeans, and conſequently the moſt valuable. From conſtant obſervation they are enabled to judge pretty nearly when the young ones are about to fly; and then their uſual method to come at the neſt, is by cutting down the tree. In the fall of the tree it often happens that the young parrots are killed; but if one of them ſurvives the ſhock, the natives conſider that as a ſufficient recompence for their trouble.

But as the natives are not able at all times to ſupply the demand with young ones, they are then contented to take the old; and for that purpoſe ſhoot them in the woods with arrows, headed with cotton, which knocks down the bird without killing it. In this mode they are not however equally ſucceſsful, as notwithſtanding all their care, many of them die with the blow they have received. But even this is not entirely a diſappointment, for the ſavage takes them home as proviſion for his family; and it is alſo to be obſerved, that though ſome of them are but tough and ill-taſted, yet there are others particularly of the ſmall paroquet tribe, that are very delicate food. In general it follows, that whatever fruit or grain theſe birds moſtly feed upon, their fleſh partakes of the flavour, and becomes good or ill taſted, according to the quality of their particular diet. When the guava is ripe, they are at that ſeaſon fat and tender; if they feed upon the ſeed of the acajou, their fleſh contracts a flavour of garlic; if they feed upon the ſeed of the ſpicy trees, their fleſh then taſtes of cloves and cinnamon; while, on the contrary, it is inſupportably bitter if the berries they feed on are of

that

that quality. The ſeed of the cotton-tree intoxicates them in the ſame manner as wine does man; even wine itſelf is drunk by parrots, and Ariſtotle maintains, that by a ſupply of wine they are rendered more talkative and amuſing. But of all food, they are fondeſt of the carthamus, or baſtard ſaffron; which, though ſtrongly purgative to man, agrees perfectly with their conſtitution, and fattens them in a very ſhort time.

According to Labat, the paroquets of Braſil are the moſt beautiful in their plumage, and the moſt talkative birds in nature. He ſays they are very tame, and appear fond of mankind; that they ſeem pleaſed with holding parley with man, for while he continues to talk they anſwer him, and appear reſolved to have the laſt word; but they are poſſeſſed of another quality which is ſufficient to prevent this aſſociation; that is, their fleſh is exceedingly delicate, and highly eſteemed. For the purpoſe of ſupplying the table, they are greatly ſought after; and the practice is to ſhoot them as we do game in this country. They are very numerous in the woods, whither the ſportſmen purſue them; but as they are green, and exactly the colour of the

the leaves among which they ſit, he only hears their prattle, without being able to ſee a ſingle bird; he looks round him, ſenſible that his game is within gun-ſhot in abundance, but is mortified to the laſt degree that it is impoſſible to ſee them. Unfortunately for theſe little animals, they are reſtleſs and ever on the wing, ſo that in flying from one tree to another he has but too frequent opportunities of deſtroying them. Beſides this reſtleſſneſs, it is a common practice with them, as ſoon as they have ſtripped the tree on which they ſit of all its berries, for one of them to fly off to another, and, if that be found fit for the purpoſe, it gives a loud call, upon which all the reſt immediately follow. This is the only fair opportunity the ſportſman has to look for, and of which he ſeldom fails to take the advantage; being aware of the call, he is prepared againſt they take wing, and by firing among the flock, generally gets pretty amply rewarded for that exerciſe of his patience which the ſport renders abſolutely neceſſary. The ſurvivors, inſtead of taking flight at the report of the gun, rather take part with their fallen companions, ſet up a loud ſcreaming againſt their deſtroyer, and

which

which they do not ceaſe from, until they obſerve him prepared with a ſecond charge, when ſelf preſervation becomes requiſite.

Notwithſtanding there are ſo many motives for deſtroying theſe beautiful birds, they are in very great plenty; and in ſome countries on the coaſt of Guinea, are conſidered by the Negroes as their greateſt tormentors. The flocks of parrots perſecute them with their unceaſing ſcreaming; and devour whatever fruits they attempt to produce by cultivation in their little gardens. In other places they are not ſo deſtructive, though equally common; indeed, there is ſcarce a country of the tropical climates that has not many of the common kinds as well as ſome peculiarly its own. Travellers have counted more than an hundred different kinds on the continent of Africa only; there is one country in particular, north of the Cape of Good Hope, which takes its name from the multitude of parrots that are ſeen in its woods. There are white parrots ſeen in the burning regions of Ethiopia; in the Eaſt Indies, they are of the largeſt ſize; In South America, they are docile and talkative; in all the iſlands of the Pacific Sea and the Indian Ocean. they ſwarm in

in great variety and abundance, and add to the ſplendour of thoſe ever verdant foreſts.

So general are theſe birds at preſent, and ſo great is their variety, that nothing ſeems more extraordinary than that but one ſort of them ſhould have been known to the Romans, and that at a time when they pretended to be maſters of the world. The green paroquet with a red neck, was the firſt of this kind that was brought into Europe, and the only one that was known to the ancients, from the time of Alexander the Great to the Age of Nero: This was brought from India; and when afterwards the Romans began to ſeek and rummage through all their dominions, for new and unheard of luxuries, they at laſt found out ſeveral other parrots in Gaganda, an iſland of Ethiopia, and which they conſidered as an extraordinary diſcovery.

Beſides the diſorders uſual with other birds parrots have two peculiar to their kind. They are ſometimes ſtruck by a kind of apopletic blow, by which they fall from their perches, and for a while ſeem ready to expire. The other is the growing of the beak, which becomes ſo very much hooked as to deprive them

of

of the power of eating. Theſe infirmities, however, do not hinder them from being long-lived, for a parrot, well kept, will live five or ſix and twenty years.

We ſhall not pretend to trace the whole of this tribe, nor to mark their differences, yet we deem it neceſſary to point out ſome of their leading traits, and are of opinion, that by deſcribing the principals we ſhall give a tolerable correct idea of the ſeveral branches of this extenſive family. Firſt then ſtands

The *maccaw*, which is by much the largeſt of the parrot kind, being as big as a full-ſized capon; they are found chiefly in the Weſt-Indies, and where, notwithſtanding they are plenty, they are held in great eſtimation. They have a very crooked bill, almoſt in the form of a ſemi-circle, which is full three inches long, and of a light aſh colour; they have ſhort thick legs, of a duſky colour, with long toes and black talons; their heads, necks, breaſts and the under parts of their bodies, but particularly their tails are of a fine ſcarlet, and the reſt of their bodies of a beautiful and rich blue.

The *common parrot* may be ſaid to comprehend two kinds, namely, the grey and the

green; the firſt of which is by much the largeſt. The general characteriſtics of the grey parrot is the having a ſtrong black bill, very much hooked; (as is the caſe with the whole of this race) its body is of a grey, or lead colour, rather ſhaded with white about the head; and they frequently have reddiſh feathers in their wings and tails. The green parrot, as the diſtinction implies, is moſtly of that colour, though ſome are much darker than others: round its head is generally ſhaded with a bright yellow, very frequently approaching to a gold colour; ſome of them alſo have ſcarlet feathers upon their tails and wings; others blue, and many have both; but theſe trifling variations are ſo exceedingly numerous, that it would be no leſs prolix than unneceſſary to dwell upon them.

The *Lory*. The moſt beautiful of this ſpecies is that brought from the Braſils, and which is pretty near the ſize of a common parrot. It has a fine bright blue tuft of feathers growing on the top of the head; the reſt of the head and the neck, and the upper part of the back, are ſcarlet, with a fine ring of yellow encircling the neck; the covert feathers of the wings are a fine green, intermixed with yellow,

and

and the quill-feathers of a bright blue; the reſt of the body is of a pale red, and the tail-feathers generally ending with a purple.

The *Paroquet:* As the moſt eminent of theſe ſtands the one which is a native of Bengal—this is conſiderably leſs than the common parrot, the upper part of the bill is yellow, the lower part black. The back part of the head, of a paliſh red, ſhaded with purple, the throat is of a dark colour, with a ſmall black circle running round the lower part of the neck; the belly, breaſt, and thighs, are of a pale yellowiſh colour, ſhaded with green, the wings, the back, and upper ſide of the tail, are of a beautiful graſs green; the tail is compoſed of but few feathers, thoſe in the middle being the longeſt, under the ſide of it are of a pale yellow. The legs aſh-coloured. This bird by the natives of Bengal is called *Fridatutah.*

Mr. Walker, in his Memoirs of the Royal Society relating to their manner of feeding, has obſerved with relation to the *paroquet*, which he had the curioſity to diſſect, that it has beſides the gizzard two craws, the uppermoſt being only a receptacle, or ſack for the food, which is canary ſeed, to be again returned to the mouth, where it is re-chewed, having before been only huſked

huſked, this animal ruminating as ſome quadrupeds do; and he ſays he obſerved it, when upon the perch, not only bring up its food again into its mouth, and there chew it, but when the cock and hen ſit together on the perch, he would put the food out of his own mouth into the hen's; their manner of chewing is thus: the under bill being ſhorter, ſhuts within the upper, or againſt the roof of the mouth, which is fitted with ſeveral rows of very ſmall croſs-bars as the mouths of horſes, dogs, and ſome other animals are; theſe bars are not ſoft, but horny, as being part of the upper bill; ſo that the bird, by carrying the edge of the under bill, and end of the tongue, againſt the ridges in the upper, breaks and reduces to a pap the ſeeds that have been firſt moiſtened in the craw, to expedite which actions, the upper bill is joined juſt below the eyes; the food being thus macerated, is by the gula again committed to the ſecond craw; from hence the food paſſes into the gizzard, or proper ventricle, where by the motion of the gizzard it is comminuted, and thence tranſmitted to the inteſtines, on the ſides of which, within a ſmall diſtance, is placed the *pancreas*.

END OF THE FIRST VOLUME.